Incorporating *International Commerce*

MAY 29, 1972

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Commerce Today

Coming Developments in Business and Technology

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FROM THE SECRETARY

More Technology And Less Subsidies

(This column was written by A. E. Gibson, Assistant Secretary of Commerce for Maritime Affairs.)

One of the underlying objectives of President Nixon's maritime program, embodied in the Merchant Marine Act of 1970, is to encourage the American shipping and shipbuilding industries to develop and harness advanced technology to improve their efficiency and become less dependent on government subsidies.

The President's program, calling for the construction of several hundred high productivity ships over a 10-year period, is designed to restore the competitiveness of the U.S. merchant fleet and shipyards by the application of technological advancements that can minimize or offset the lower cost advantages of their foreign competitors.

When he transmitted his program to the Congress, President Nixon stressed that research and development would play a pivotal role in revitalizing the U.S. maritime industry. He said:

"We will . . . enlarge and redirect the maritime research and development activities of the Federal government. Greater emphasis will be placed on practical applications of technological advances and on the coordination of Federal programs with those of industry."

The Maritime Administration has moved quickly and effectively to carry out this mandate. As contrasted to an annual average of $3 million expended on actual research and development activities in recent years, $20.7 million was allocated for such purposes in fiscal year 1971, and $24 million was provided for the current fiscal year.

We also have reoriented and restructured our programs to focus major attention on projects which hold the promise of near-term application with attractive benefit-cost ratios.

Currently, we have some 60 R&D projects under way, encompassing such areas as satellite-shipboard navigation and communications systems, advanced propulsion plants, pollution control systems, and the development of improved shipbuilding techniques and equipment.

In another significant departure from past practices, several projects are being undertaken in conjunction with industry on a shared-cost basis. The direct involvement of industry and their financial commitments to such projects not only assures that this research is in cadence with the industry's needs, but also augments the amount of research the agency can fund through its budget.

Reflecting the high priorities that have been assigned to R&D, the Maritime Administration during the past 12 months established National Maritime Research Centers at Kings Point, N.Y., and Galveston, Tex. These facilities will carry out field testing and evaluation of a wide variety of systems and hardware emanating from our programs.

The American maritime industry has compiled a distinguished record of pioneering innovations—such as container and barge carrying ships—that have had major, worldwide impact on world shipping and shipbuilding operations.

We are confident that with the increased emphasis that is being given to R&D by President's Nixon's maritime program, significant technological progress will be made in the years immediately ahead which will revitalize and improve the competitive position of our shipping and shipbuilding industries.

AE Gibson

Commerce Today

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COVER: *This is the type of supertanker to be built to transport oil from the North Slope of Alaska pipeline to the West Coast once that operation gets under way. Bethlehem Steel Corp. built this behemoth for Union Oil Co. of California. It is shown during recent sea trials. See story on Page 4.*

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ECONOMIC HIGHLIGHTS

Profits Increase Strongly In First Quarter But Remain Low Compared To Wages

Economic Highlights is prepared by Dr. Harold C. Passer, Assistant Secretary for Economic Affairs, and is based on the latest economic indicators (see charts on adjoining page).

After-tax corporate profits rose substantially in the first quarter of 1972, as expected in a rapidly expanding economy, and it marked the fourth consecutive quarterly increase. Furthermore, after-tax profits have now surpassed the previous peak reached in 1966.

When more meaningful measures are applied, however, corporations do not appear so corpulent. Like the man in search of a nickel beer, corporations have found that they have to pay higher prices for the things they buy. After adjustment for inflation and for the increase in the amount of investment on which these profits are earned, profits are very low by historical standards.

This strong downtrend in real profits has persisted since the late 1940s. The trend of real wages has been in the opposite direction —sharply upward. Wages have tripled since the late 1940s, and even after adjustment for inflation, they have almost doubled.

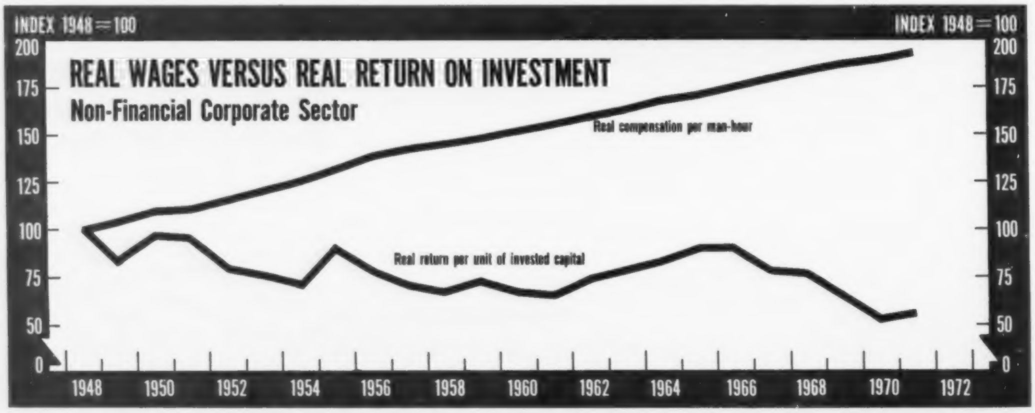
The chart below shows how real compensation per manhour in the non-financial corporate sector has sailed steadily upward while the real return on a given unit of real invested capital has tumbled. Corporate profits have fared poorly when measured as a percentage of national income; conversely, labor's share has climbed steadily.

While wages have been measured in real terms for many years, it was only recently that the Commerce Department started publishing a series that shows real profits. The relationship between wages and profits is put into better perspective if both are adjusted for price changes.

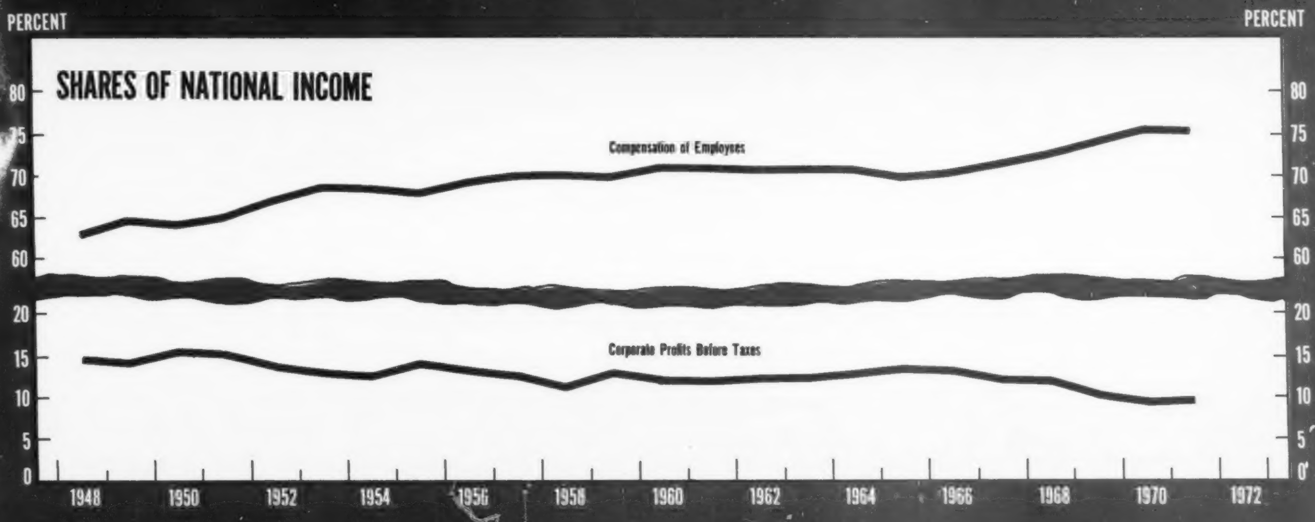
The relative size of the share of national income that goes to profits is of great economic significance because profits generate the power that drives the economy; they provide the reward that lures investment, which in turn leads business to expand and create more jobs.

Other economic data

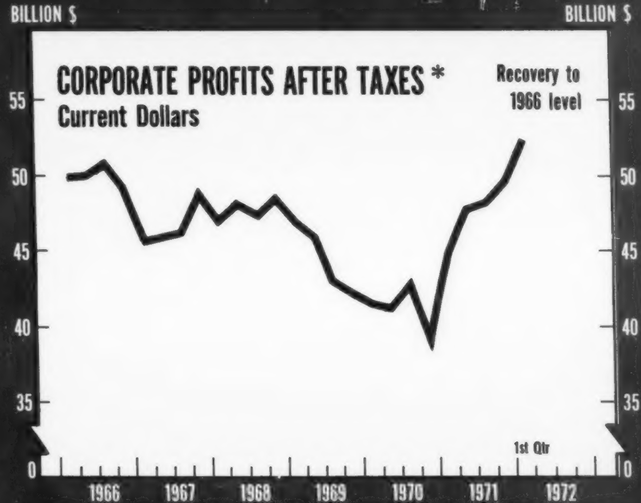
Retail sales moved up strongly in March and despite a decline in April, remained well above earlier months. Industrial production increased sharply in April and has registered a substantial gain during an unbroken chain of eight monthly increases.



Latest Indicators

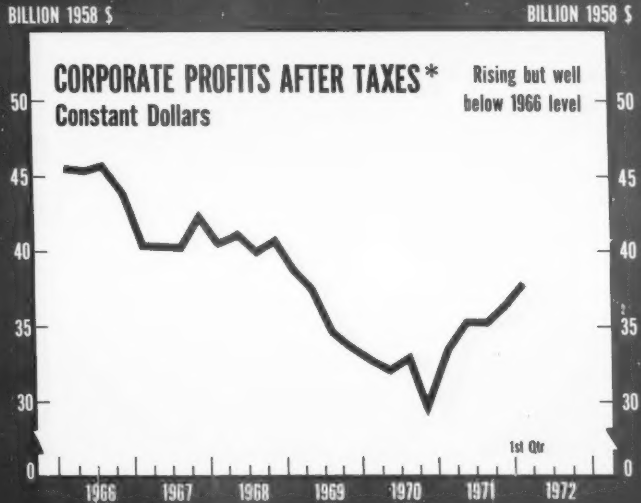


SHARES OF NATIONAL INCOME



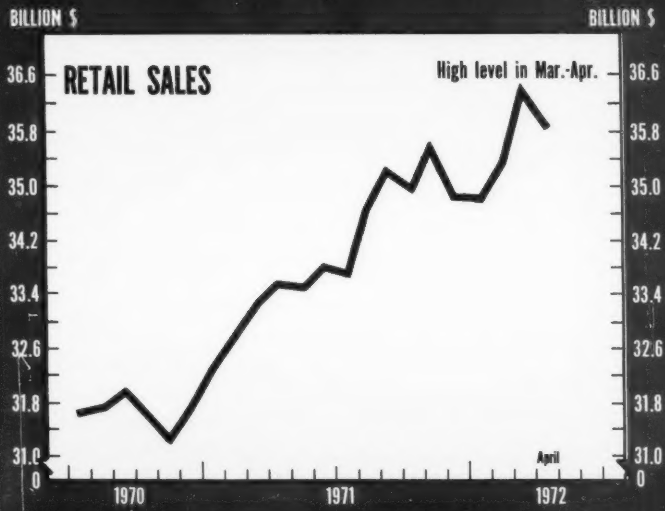
CORPORATE PROFITS AFTER TAXES *
Current Dollars

Recovery to 1966 level



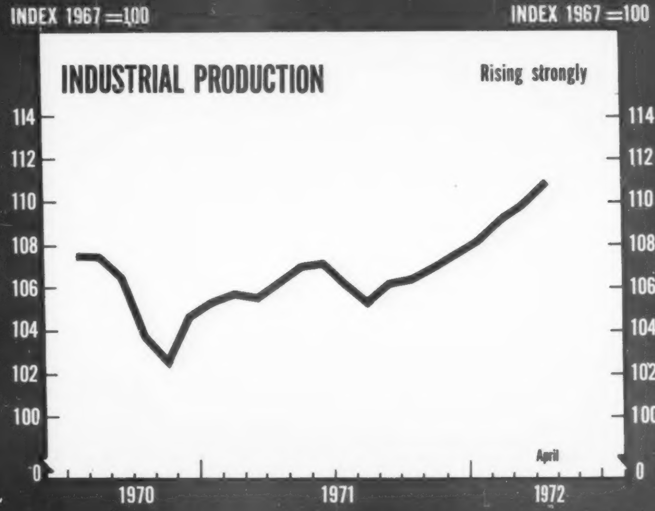
CORPORATE PROFITS AFTER TAXES *
Constant Dollars

Rising but well below 1966 level



RETAIL SALES

High level in Mar.-Apr.



INDUSTRIAL PRODUCTION

Rising strongly

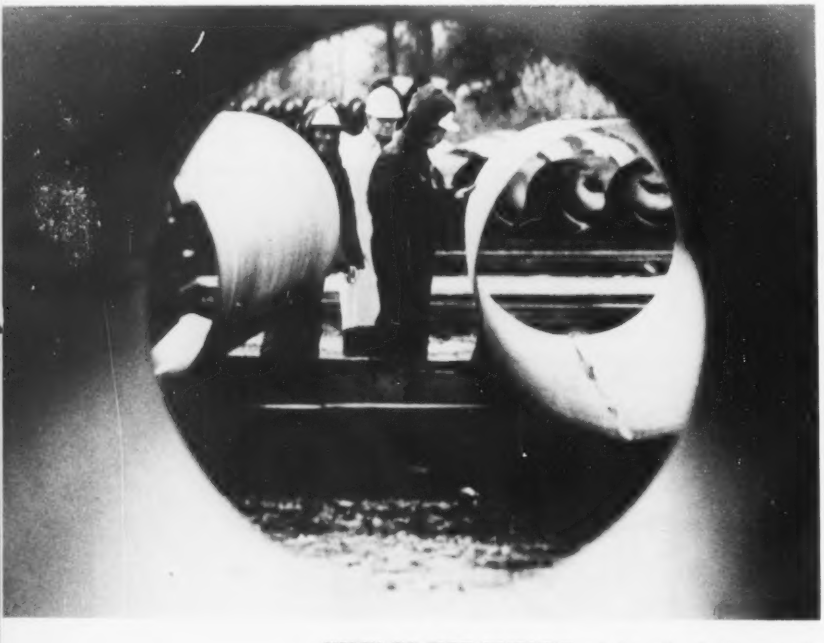
All data seasonally adjusted except annual data.

* Annual rates

Commerce Today
Vol. II, No. 17
May 29, 1972

Alaskan Pipeline Blends U.S. Need For Oil With Boost For Shipbuilders

May Need 30 New Ships To Fuel West Coast; Court Injunctions Still Must Be Surmounted



VIEW TO THE FUTURE—*A length of pipe awaiting use in the trans-Alaska pipeline frames a trio of Alyeska Pipeline Service Company inspectors checking a section of the pipe that has just received protective epoxy coating. It may be in use by 1976.*

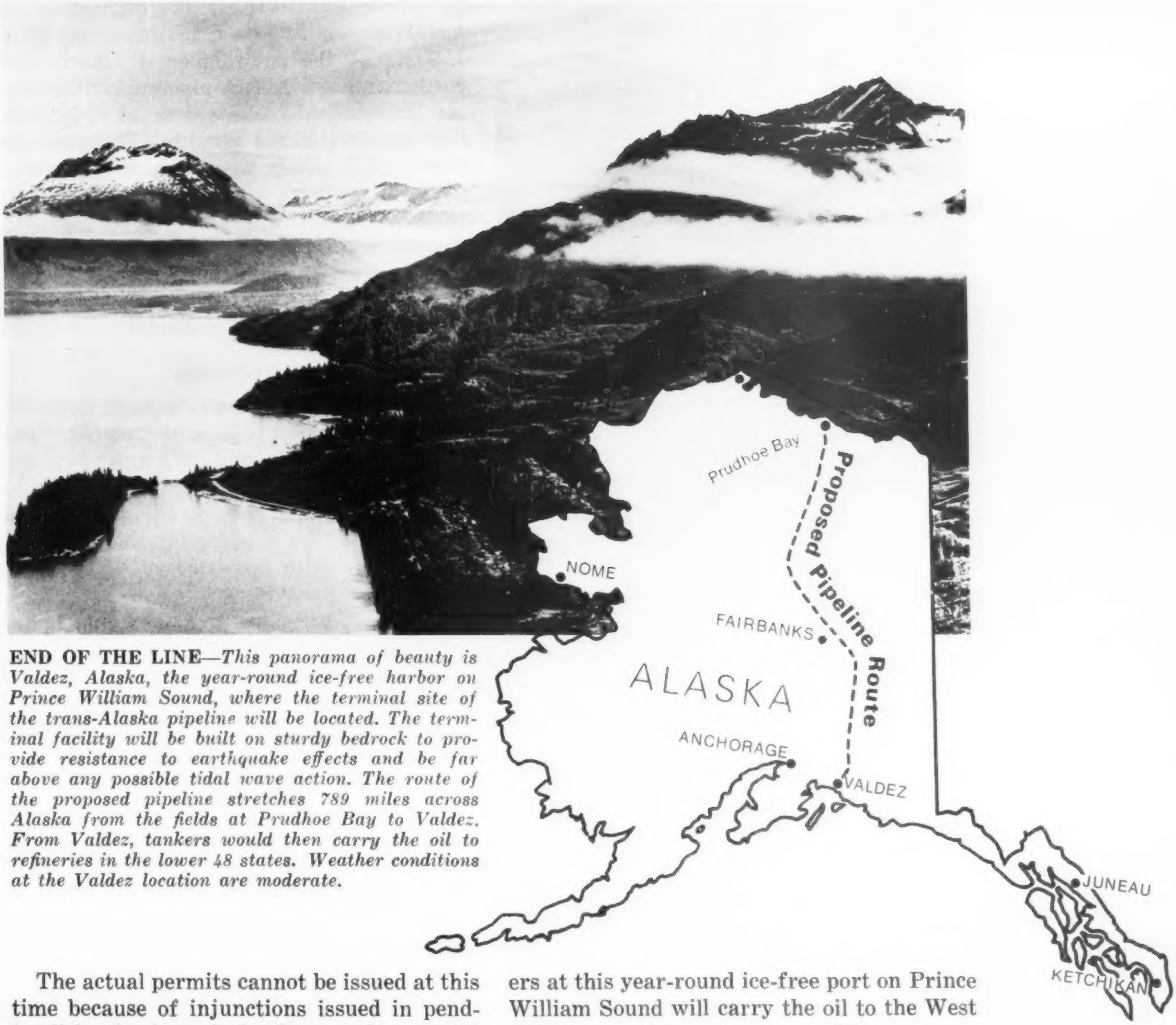
The technology is *here.* The oil is *there.* And the Nixon Administration is working to bring them together.

In deciding to grant right-of-way permits for the construction of the proposed trans-Alaska pipeline, it has done just that. In fact, it has not only paved the way for bringing badly-needed Alaskan oil to the lower 48 states, but also it has opened the doors for the construction of at least 30 tankers to be built in U.S. shipyards and fly the U.S. flag.

The long-awaited decision was announced by Secretary of the Interior Rogers C. B. Morton, who said that this could mean possible delivery of U.S. oil to the United States to help solve the looming energy crisis by as early as 1976.

Morton explained, "The U.S. vitally needs the Prudhoe Bay oil and we need this oil delivered to our West Coast as promptly and as safely as possible."

He added that he is convinced "that the decision is consistent with the policies set . . . in the National Environmental Policy Act of 1969."



END OF THE LINE—*This panorama of beauty is Valdez, Alaska, the year-round ice-free harbor on Prince William Sound, where the terminal site of the trans-Alaska pipeline will be located. The terminal facility will be built on sturdy bedrock to provide resistance to earthquake effects and be far above any possible tidal wave action. The route of the proposed pipeline stretches 789 miles across Alaska from the fields at Prudhoe Bay to Valdez. From Valdez, tankers would then carry the oil to refineries in the lower 48 states. Weather conditions at the Valdez location are moderate.*

The actual permits cannot be issued at this time because of injunctions issued in pending litigation brought by three environmental organizations, who are fighting the pipeline tooth and nail. These 1970 Federal Court injunctions still stand, and the organizations are seeking partial summary judgment to halt the construction.

Federal approval

Even with these pending actions, the Federal approval of the project has given hope to the Alyeska Pipeline Service Company, the consortium of companies who have banded together to bring this vital oil link to the continental U.S., that construction could begin in the spring of 1973.

The proposed pipeline is expected to carry 2 million barrels of oil per day through a four-foot pipe 789 miles down through Alaska from Prudhoe to Valdez, where tankers at this year-round ice-free port on Prince William Sound will carry the oil to the West Coast and other parts of the United States.

The cost of this trans-Alaska pipeline system is estimated to be $3 billion—the largest private construction project in history. But it will benefit the entire United States, as well as Alaska and its people.

In addition to construction benefits, economic impact on a continuing basis will accrue to Alaska and the U.S. as a whole.

The total gross payroll involved with the pipeline construction is estimated at $800,000,000 in today's dollars—including $150,000,000 in Federal, state and local payroll taxes, most of which will be spent in Alaska.

In addition, expenditures for materials and supplies, transportation and equipment, catering and all of the other non-labor costs

UNDISTURBED BY MAN'S PRESENCE—*Caribou graze nonchalantly on the Arctic tundra within sight of one of the operating drilling rigs at Prudhoe Bay. Thousands of the caribou saunter through the oil field, stepping over feeder lines and other works of man, undisturbed by the presence of man.*

related to the construction of the controversial pipeline are estimated at $1.5 billion.

While it is true that a significant impact of this $3 billion construction investment will be in Alaska, the major portion will be distributed throughout the lower 48 states.

According to Robert L. Miller, manager of public relations for Alyeska Pipeline, some of the points brought up by opposers to the project not only include environmental issues, but the fear that some of this Alaskan oil will be sold to Japan instead of being brought into the United States.

Miller indicates that some people feel that 2 million barrels a day is more oil than is needed today on the West Coast.

"To begin with," Miller stresses, "the pipeline will take at least three years to build and link up with Valdez."

Even when the linkage is completed (possibly by 1976), only 600,000 barrels per day will be able to be delivered until further pumping stations are installed along the way.

"It will take another two years of operation before the capacity reaches 1.2 million barrels per day, and seven years after the start-up before it comes up to the 2 million per day capacity which is expected.

In the meantime, the Alyeska official points out that by 1980 the West Coast will realize a deficit of about 1.6 million barrels of oil per day, and by 1983 it will be able to absorb the 2 million barrels a day and even more!

"The only way that any of this oil could be made available to markets other than the United States," Miller said, "is if the low deficit estimate figures are true. And it is more than likely that the foreseen energy crisis will demand the middle or high deficit figures in fulfilling its needs for crude oil.

Some of the environmental reasons for condemning the Alaska pipeline include that the proposed pipeline will cross 350 rivers and streams, three mountain ranges, unnumbered caribou migration paths, and—most important—one known earthquake fault (skirting two others). Environmentalists claim that the alternate proposed route through Canada would correct these factors—particularly the line crossing an earthquake fault.

Surmountable problems

Miller explains that this seismic factor is pertinent *only* if it is unsurmountable. "Because of research and scientific developments," he said, "we can predict what effects an earthquake will have on the pipeline and we can design for it—crossing the fault perpendicularly with construction designed to withstand any earthquake."

Miller noted further that the trans-Andes pipeline, in a severe earthquake area, has never been ruptured. Further, in the San Fernando Valley, a land of strong earthquake faults, no pipeline that has been *electrically welded* has ever been severed.

In addition, if the route through Canada were pursued, it would spur exploration for oil in that country—but discourage it in the U.S. Arctic, where such discoveries could mean returns for this Nation.

Miller said that there are at least 10 to 15 billion barrels in reserve in Alaska now that have not yet been discovered.

Commenting on another outcry from the opposing side on the seismic hazard existing at Valdez, the termination point of the pipeline, Miller pointed out that the future marine terminal site for the pipeline and all storage facilities will be located at a spot which during the 1964 earthquake suffered no damage from either sea waves or earthquake-related structural failures.

"The pipeline and all storage facilities at the site will be located at elevations from 200 to 450 feet above sea level," he said.

At that location, the maximum run-up from seismic sea waves in the 1964 earthquake was only 31 feet.

Denying the construction of the trans-Alaska pipeline, would also be denying a tremendous boost to the U.S. Merchant Marine.

Of prime importance is the fact that if

there is no North Slope Alaska oil production, the West Coast tanker arrivals will be mostly foreign vessels.

"But," emphasizes A. E. Gibson, Assistant Secretary of Commerce for Maritime Affairs, "if the pipeline is built, U.S.-flag vessels will be used to bring the oil to the West Coast, manned by highly-trained American crews."

Based on shipment of 2 million barrels per day from Valdez in 1983, it is forecast that 41 flag tankers will be required—33 of them to be constructed for this project, eight to be transferred from other services, according to Alyeska.

Tanker fleet increase

Some of these tankers—the majority of which are the large "economy-size" now being built to specifications of more than 100,000 deadweight tons—are now on order. Additional supertankers will be ordered, increasing the total U.S. tanker-fleet tonnage for just North Slope oil carriers to more than 5 million dwt.

Vessels carrying oil from Valdez are likely to range in size from 30,000 dwt to 250,000 dwt. By far, the most prevalent size will be 70,000 to 120,000 dwt. Vessels up to 120,000 dwt will be used for Los-Angeles-Long Beach and Puget Sound deliveries. Because of port limitations, 80,000 dwt tankers are the largest expected to be used for San Francisco.

According to Captain S. L. Mee, senior marine superintendent for the British Petroleum Company, the largest of these vessels will not pose any unusual safety threat. "In fact," he said, "they will handle better than the smaller tankers."

The large 250,000 dwt tankers, while not contemplated for frequent use at Valdez, can stop in about two and a half miles, from full speed (16 knots), fully loaded. And when approaching Valdez, they will be operated at much lower speeds.

Tankers sailing from the Valdez area to the West Coast will travel the main north and south sea lanes, and will not use the Inside Passage. For more than a decade, tankers have been using this north-south route to transport oil from Alaska's Cook Inlet.

Gibson said that the "passage between Alaska and the Strait of Juan de Fuca will be made on the high seas well off the coast of Canada.

"In the Gulf of Alaska, the seas do get rough in the winter months; however, this condition prevails on the northern oceans everywhere else in the world. The North Pacific and the North Atlantic easily rival the Gulf of Alaska in this respect," he states.

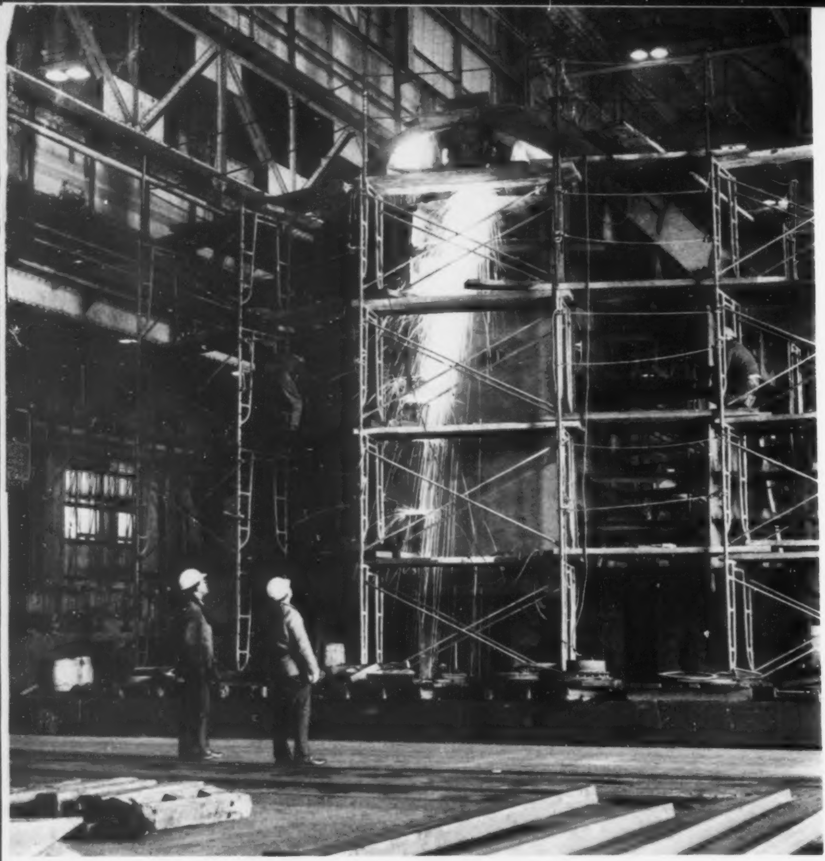
American ships and their operating procedures are designed to withstand the most severe conditions.

Gearing up for action

Meanwhile U.S. shipyards are getting ready to gear up to take care of the increased tanker orders. Most of this impact will be felt in East Coast shipyards, but Gulf Coast and West Coast yards will also benefit.

These shipyards and some ports will invest an estimated $200 million to upgrade

SUPERTANKER—*Giant tankers such as this one will carry oil from Valdez, Alaska to the lower 48 states when the pipeline is completed. The line will generate the building of more than 30 such tankers. This tanker is the MV Falcon Princess, 672 feet long and capable of transporting 300,000 barrels of oil. It was built by Litton Industries at its Mississippi facilities for Falcon Tankers, Inc.*



BUILDING FOR AMERICA—*A workman gouges a piece of steel with an arc air torch, working on the bulbous bow section of a ship being assembled in the fabricating shop at Bethlehem Steel Corporation's Sparrows Point, Md., shipyard. Bethlehem has just delivered one new tanker and is building seven more at the Maryland yard. The corporation also has a design ready to build tankers of 265,000 dwt.*

facilities to handle tankers and the tanker building project.

Nationally, right now, 16 tankers aggregating nearly 1,600,000 deadweight tons are on order from shipyards within the United States, according to the Maritime Administration's Merchant Marine Data Sheet.

Leading the field in tanker builders is Bethlehem Steel Corporation's Sparrows Point Shipyard in Maryland—with contracts for nearly half the petroleum tankers in construction or on order as of March 1.

Across the Nation, Bethlehem has three major shipbuilding facilities. Besides the Sparrows Point Yard, which offers a building basin and five building ways for ships up to 830 feet, Bethlehem has a facility at Beaumont, Tex., which contains two side-launching ways over 800 feet each, and a San Francisco Yard with a building way for vessels to 600 feet.

The corporation's vice president in charge of shipbuilding, Walter F. Williams, said that Bethlehem is taking on the challenge of building ships that will help the U.S. Merchant Marine and its supporting industries.

The Baltimore area Sparrows Point shipyard delivered one 70,000 dwt tanker this month. It has orders for three more of this size, and four tankers of 120,000 dwt each. These eight tankers together total 412,800 gross tons and 759,200 dwt.

Seatrain Shipbuilding Corporation, which has its facilities located in the former Brooklyn Navy Yard, has the second largest number of tankers under construction or on order at the present time, notes the report.

Seatrain Shipbuilding, in fact, has orders for the three biggest tankers constructed in an American yard. Each of these vessels is going to be a 225,000 dwt tanker, with a combined deadweight of 755,000—more than the total of the eight ships being built at the Bethlehem Steel Maryland facility.

Bethlehem Steel, however, has a new shipbuilding basin capable of accommodating vessels of more than 300,000 dwt. It expects orders for tankers for a standard design it has developed for a 265,000 dwt vessel, as soon as the green light says "go" all the way for the trans-Alaska pipeline.

The Maritime Administration, looking into the future, forecasts other types of shipbuilding.

Gibson indicates that within three or four months, the Maritime Administraton expects to award contracts covering six liquefied natural gas tankers at a total cost of about $500 million and two roll on-roll off cargo ships, costing approximately $60 million.

"We also anticipate," he said, "letting contracts for the subsidized construction of six large tankers in the 230,000 dwt size range, which represent an addition $350 million investment."

The Assistant Commerce Secretary also noted that existing and planned subsidized shipbuilding awards during this calendar year should aggregate well over a billion dollars.

"And," Gibson said, "the approval announced by Secretary Morton for the construction of the Alaskan pipeline will trigger a surge of tanker orders."

. . . And the use of the technology *here* to bring the oil from *there*, not only boosting many sectors of the American economy, but helping to revitalize the U.S. Merchant Marine. —*Maritime Administration*

U.S. Question: Growth With Improvement In Ecology, Quality Of Life

U.S. Senator Says Concern With Environment 'Is Not A Fad; And Not A Religion Either'

America's greatest challenge is to create a quantum increase in new industrial wealth, see that the underdeveloped nations have a chance to prosper and at the same time maintain concern for the quality of life on this planet.

Conference keynoter

This keynote of the International Association for Pollution Control's conference on Pollution Control in the Marine Industries was struck by U.S. Sen. Howard H. Baker, Jr., of Tennessee, who will be a member of the U.S. delegation to the United Nations Conference on the Human Environment in Stockholm, Sweden.

The mid-May conference in Washington drew nearly 300 key representatives of government, the private sector and academia from the United States and several foreign countries, together for two days of wrestling

Howard H. Baker, Jr.
U. S. Delegate
Conference on the
Human Environment

NATIONAL ASSOCIATION FOR POLLUTIO

BETWEEN SESSIONS—*Program participants talk with U. S. Sen. Howard H. Baker, Jr., at break in Marine Pollution Conference. From left are Capt. Joseph K. Taussig, Jr., president Taussig Associates; Joseph S. Ives, Jr., LFE-Trapello; Rear Admiral W. M. Benkert, U. S. Coast Guard; Sen. Baker, Thomas F. P. Sullivan, President, International Association for Pollution Control; Robert N. Tomb, executive vice president, Consultant's Group.*

with solutions to problems posed by the challenge.

Problems are:

- Economic impact of pollution abatement and its effect on industrial growth.
- Conflicting and rapidly changing laws and governmental regulations which often form roadblocks and discourage industries from seeking solutions.
- How to live and remain industrially competitive on a planet with polluting neighbors determined to get their piece of economic growth.

"We could be the cleanest nation on earth and if there was not a corresponding effort on the part of others, our cleanliness would have no effect on the environment," Sen. Baker asserted.

Sen. Baker, who served as chairman of the Secretary of State's Advisory Committee to determine what U.S. policy should be at the Stockholm conference, expressed the hope that the UN conference would let the underdeveloped nations of the world know that pollution is not just a "rich nations' hangup." The Tennessee Senator noted that President Nixon may be the first to designate an advisory committee to hold public hearings to get general participation in what the country's policy should be on a subject of international importance.

Other accomplishments Sen. Baker said he hopes will come from the UN meeting are a permanent institutional arrangement for monitoring pollution control, and specific things such as an ocean dumping treaty.

Sen. Baker told the Washington conferees that the first UN conference holds tantalizing possibilities that the United Nations might have a new role in monitoring the environment.

"Concern with the environment is not a passing fad. And not a religion either," Sen. Baker said. "We (in the United States) are not a closed system. Everything we do affects others . . . And the air envelope and water must be shared."

Maritime Administration participants in the Washington conference discussed costs, need for a deepwater terminal on the Atlantic coast and alternatives for controlling oil pollution.

Commerce study

Richard W. Black, program manager for Maritime's Office of Advanced Ship Operations, said the Commerce Department agency is sponsoring a study to determine the technical, operational and economic feasibility of converting Reserve Fleet surplus Liberty ship hulls into a series of floatable plants for treatment of oily waste from the marine industry and also sewage from municipalities located near navigable water ways.

This study will develop capital and operating costs for alternative floating plant concepts and compare these with costs of land-based plants of equivalent capability, Black stated.

Early call for answers

Armour S. Armstrong, chief of Maritime's Office of Ports and Intermodal Systems, noted that President Nixon made an early call for international solutions to oil spill problems in 1970, asserting that the growing threat from oil spills can be contained, not by stopping industrial progress, but through a careful combination of international cooperation and national initiatives.

In assessing the staggering "Economic Impact of Marine Pollution Control," E. Scott Dillon, chief of Maritime's Office of Ship Construction, told the conferees that initial emotional reaction following the general public's rather sudden awareness of environmental problems generated pressure for any solutions that would work, regardless of costs.

"After delving into these solutions and appreciating their complexity and their economic consequences, we may now be in a

LAW'S IMPACT—*Rodney Duncan, Alcan Shipping, Montreal, Canada, discusses impact of international law on marine industry at the conference.*

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LAW OVERVIEW—*Rear Admiral W. M. Benkert, U. S. Coast Guard, gives overview of federal environmental laws and regulations to the audience.*

better position to calmly select the most cost effective antidote," Dillon concluded.

Dillon said, "It is most difficult to reach a rational decision on cost effectiveness of various approaches to the prevention of accidental and intentional oil spills because of the number of partial solutions. Some of the partial solutions do not involve ship design at all and many are quite difficult to quantify in terms of increased operating costs and actual benefits derived."

"The vast oceans of this globe have provided an inexpensive and convenient receptacle for waste products generated by man's activities," said Dillon, continuing that "we now doubt whether man can continue to use the oceans for this purpose."

Self destruction?

"Transportation of petroleum overseas in tremendous quantities has at last alarmed the world's people to the possibility of self destruction if the oceans are despoiled beyond tolerance limits for food chain survival," Dillon added.

"Reversal of the polluting trends depend upon new solutions to waste disposal," Dillon stated, "These are proving expensive indeed, so much so that our resources, otherwise needed to sustain a respectable standard of living may easily be diverted if we approach the solutions haphazardly and fail to identify the most cost effective avenues of attack as well as the practical limits of abatement necessary for environmental protection."

Dillon pointed out that the need to provide a fuel source to bolster the United States' declining energy resources threatens oil pollution of the seas on an increasing scale if measures are not taken to curb tanker oily ballast and wash water disposal directly to the sea.

"Energy is an indispensable ingredient of economic growth and technological progress," Dillon asserted, "The security of our nation, or of any major nation, depends upon its future supply of energy."

Maintaining the supply

Waterborne movements of crude oil and petroleum products will maintain this supply, he explained.

He discussed problems of quantifying the economic impact and assessing the costs and benefits of the control restraints placed on the marine industry in order to derive the required measure of control.

"We must be then committeed to a policy of protecting the environment without retarding social and economic progress," he continued. "We are facing a very critical period in reaching a balanced allocation of resources with the view to environmental good housekeeping.

Dillon said, "the major viable alternatives for ship generated oil pollution abatement are traffic separation and harbor radar control schemes, improved navigational aids and equipment aboard ships, upgrading operating personnel, navigating skills, segregated ballast tankers, improved load on top operation and in port disposal of dirty ballast."

Thomas F. P. Sullivan, president of the International Association for Pollution Control, presided at the second annual conference. Government participants were Environmental Protection Agency, U.S. Coast Guard, Maritime, Department of the Navy, Department of the Army, Council on Environmental Quality, National Oceanic and Atmospheric Administration, and National Industrial Pollution Control Council.

Other participants

With Dillon on the "Economic Factors" panel which concluded the two-day session were Joseph S. Ives, Jr., of LFE-Trapello, moderator, Henry Berler, vice president of Frost and Sullivan, Inc., who discussed "Market for Marine Pollution Control Equipment Services." Theadore B. Ray of Newport News SBDD Co., and F. A. Lewis, senior vice president of Insurance Co. of North America and chairman of the Water Quality Insurance Syndicate. Lewis, discussing Insurance for the Marine Industry Against Pollution Accidents," said his syndicate has filled the gap created by a need for insurance against oil spills such as the Torry Canyon.

Other participating organizations included the American Association of Port Authorities, American Association of Petroleum Geologists, American Waterways Operators, Inc., Boating Industry Association, British Hydromechanics Research Association, National Association of Engine and Boat Manufacturers, National Waterways Conference, National Association of Marine Services, Inc., Shipbuilders Council of America, International Mariners Association and American Institute of Marine Underwriters.

June meeting

The Stockholm Conference, scheduled for June 5-16, will have broadbased support from the 130 member Nations of the UN, according to Sen. Baker.

In addition to Sen. Baker, the U.S. delegation to the UN conference will be Russell Train, chairman of the Council on Environmental Quality; William Ruckelshaus, administrator of the Environmental Protection Agency; Laurance S. Rockefeller, Secretary of Interior Rogers C. B. Morton, and Christian A. Herter, special assistant to the Secretary of State for Environmental Affairs.

CONFEREES HEAR SENATOR—*Delegates at the second annual conference on Pollution Control in the Marine Industries listen to U. S. Sen. Howard H. Baker Jr., at opening session in Washington, D.C., in mid-May. The two-day meeting delved into all aspects of marine pollution and its costs.*

U.S. Economic Gains, Outpacing Those Abroad, Affecting Trade Balance

Imports Strong But Foreign Demand Remains Soft In 1st Quarter; Reopening Of Ports Is Felt

A sharp recovery in U.S. exports and imports is shown in the overall trade assessment for the first quarter of 1972, mainly reflecting abnormal activity as traders sought to make up for delays caused by recent dock strikes.

However, despite the quickening in movements of goods, the U.S. balance of trade worsened from its disappointing 1971 showing largely because the U.S. economic rebound is not yet being matched abroad. The initial impact of the currency realignment was negative, as expected, but the figures do not erode confidence that the long run effect will be beneficial.

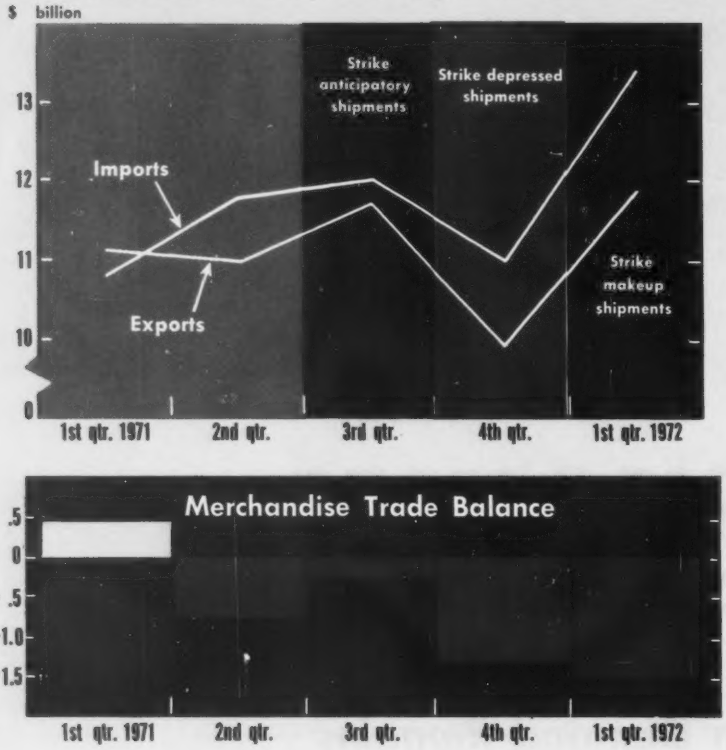
Exports, seasonally adjusted and excluding military grant-aid, climbed 23 percent over their level in the final three months of 1971 to $11.9 billion in January-March 1972 while imports increased to $13.4 billion, an advance of 21 percent. Comparison of the January-March trade totals with those of the corresponding period a year ago shows exports increasing by 6 percent and imports by 24 percent.

After showing a $440 million surplus in January-March 1971, the trade balance deteriorated substantially, posting deficits in each of the following quarters. As exports plummeted more sharply than imports when Atlantic and Gulf ports were closed by strikes, the deficit reached $1.3 billion in October-December. Continuing the deterioration, imports exceeded exports by $1.5 billion in the first quarter of 1972 compared to a $2 billion deficit for all of last year.

The initial impact of the December 1971 international currency realignment—which in the long run will improve the U.S. trade position—had a negative effect on the U.S. trade balance in the first quarter. This was not an unexpected development since the immediate result of the dollar depreciation was to raise the price of imports before the volume could be reduced by the demand-dampening effects of higher prices. Some of the sharp increase in January-March 1972 imports undoubtedly stems from this initial perverse effect on import values. At the same time, demand for U.S. exports, which have become more price competitive with the currency shifts, has not yet strengthened.

The deterioration in the trade balance

Dock Strikes Alter Foreign Trade Picture



particularly reflects the influence of cyclical conditions here and abroad. With the exception of Canada, economic activity in the United States' major foreign markets continues well below potential, and demand for U.S. exports remains weak. On the other hand, the rapid rise in imports was stimulated by the economic recovery now well under way in this country.

First quarter 1972 trade was again disrupted by renewed dock strikes at West Coast ports between Jan. 17 and Feb. 20. The negative impact of this strike was probably minor, however, having been offset by abnormally high levels of shipping which took place before and after the shutdown and by diversions to other ports. There were also heavy cargo movements at East and Gulf ports in January-March as an aftermath of the work stoppage there last autumn.

Although difficult to measure precisely, the net effects of the dock strikes—both in 1971 and the first quarter of this year—appeared relatively small and roughly the same for both exports and imports. Consequently, the trade balance did not seem to have been affected to a significant degree. These results contrast with experience in previous dock strikes when it was thought that export losses had exceeded those in imports. One explanation may be that exports now trail imports by a considerable margin, especially in waterborne trade. Another reason is that West Coast ports, which handle predominantly imports, were closed during the current longshoremen's strikes while in previous postwar shutdowns Pacific ports remained open. Finally, U.S. traders may have been more aware of potential shipping disruptions and scheduled exports accordingly.

Nonagricultural exports gain

Shipments of nonagricultural products rose sharply in the first quarter from strike-depressed levels in the final three months of 1971. At a seasonally adjusted total of $9.7 billion, nonfarm deliveries exceeded the fourth quarter total by one fifth. The rate of gain from January-March 1971, however, was a modest 7 percent.

Exports of machinery, after a disappointingly small increase last year, climbed sharply as compared with either the fourth quarter or the corresponding period a year ago. While the major portion of the increase over the December quarter consisted of makeup shipments following the dock strike, foreign demand also seems to have picked up somewhat, particularly in Canada. Exports of construction equipment posted a strong gain, mainly under the impetus of significant advances in Canadian investment outlays. That country also accounted for the major part of the growth in air conditioning and refrigeration equipment exports.

Shipments of agricultural machinery and farm tractors, which rose strongly after mid-1970, continued their upswing. Exports of electric power-generating machinery and switchgear, especially shipments of generators to a number of developing countries, maintained their buoyant 1971 pace. A sharp gain in sales of radio and television equipment to Canada helped boost telecommunications apparatus exports by more than one fourth.

Computers and parts, whose sluggish export performance last year was an important factor in the lackluster showing of total machinery sales, climbed only marginally despite a sharp increase in deliveries to Canada.

Transport equipment sales, which accounted for nearly all of the nonagricultural export gain last year, increased over their

October-December value, but showed little change from levels attained in any of the first three quarters of 1971. Deliveries of automotive products to Canada rose again after a dip in the preceding three months. Most of the advance was in shipments of parts to U.S. subsidiary plants, reflecting further gains in Canadian car production.

Civilian aircraft exports maintained their fourth quarter 1971 level, but fell somewhat from the same period last year. Sales of jumbo jets increased further, while those of smaller passenger transports declined sharply as compared with January-March 1971.

Chemical exports rose by two fifths from the preceding quarter, mostly as a result of heavy makeup shipments following the dock strike. The increase from a year ago amounted to 13 percent, possibly signaling a pickup in foreign demand. Deliveries of organic compounds and plastic materials led the advance.

Exports of a number of industrial materials recovered sharply from the strike-affected fourth quarter but, in general, remained at or below levels recorded in the same period a year ago, indicating continued sluggish demand in overseas markets. Steel shipments rose marginally from the first quarter 1971, mainly to Canada. Though deliveries of coal climbed from the fourth quarter when they were depressed by a miners' strike, there was no change from year-earlier levels. Sales of iron and steel scrap fell from January-March 1971, partly reflecting lower scrap prices. Copper exports, although rebounding from depressed levels caused by strikes last year in both the industry and at U.S. ports, were 16 percent below their total recorded in the first three months of 1971.

Last year's dock strikes caused particularly severe distortions in the quarterly pattern of agricultural exports since most of these commodities move by vessel. After dropping 20 percent in the fourth quarter of 1971, farm exports, swollen by strike-delayed deliveries, jumped by a third in January-March to a total of $2.2 billion. Compared to the same period a year ago, the increase was 6 percent.

A large portion of the rise in deliveries of agricultural products represented a huge outflow of unmanufactured tobacco. This product would normally have been loaded during the peak shipping months of September through December, but was delayed by the port shutdowns.

Major U.S. Exports In 1972

Millions of dollars, seasonally adjusted except as noted

Commodity	January-March 1972 Value		
		Change from Oct.-Dec. 1971	Change from Jan.-March 1971
Exports, total	11,917	+2,189	+678
Automotive parts, passenger cars	818	+ 153	+ 59
Aircraft and parts	806	+ 12	−102
Computers and parts	289	+ 11	+ 8
Power machinery; switchgear	219	+ 42	+ 52
Telecommunications equipment	207	+ 31	+ 45
Materials handling equipment	167	+ 34	+ 5
Chemical elements and compounds	427	+ 95	+ 42
Plastic materials and resins	177	+ 49	+ 22
Coal	277	+ 138	0
Iron and steel	212	+ 34	+ 5
Textile yarns and fabrics	186	+ 18	+ 27
Paper and manufactures	178	+ 44	+ 3
Soybeans	371	+ 105	+ 33
Tobacco, unmanufactured	318	+ 270	+145
Corn	234	+ 54	+ 49
Wheat*	224	+ 28	− 57

** Not seasonally adjusted.*

The rise in soybean exports from the first as well as the fourth quarters of 1971 appeared to have been a recovery from the dock strikes. Sales to the USSR accounted for nearly all of a strong increase in corn exports.

Consumer imports soar

Arrivals of consumer goods accounted for two fifths of the rise in U.S. imports in January-March over the comparable 1971 period. Stimulated by the continued growth in U.S. demand and rising prices, entries of consumer goods expanded sharply to $4.9 billion—$1.1 billion above last year's first quarter level and $800 million above the total recorded in October-December. Some of this

Major U.S. Imports In 1972

Millions of dollars, seasonally adjusted except as noted

Commodity	January-March 1972 Value		
		Change from Oct.-Dec. 1971	Change from Jan.-March 1971
Imports, total	13,418	+2,367	+2,619
Cars, parts from Canada	861	+ 125	+ 105
Cars, parts from other countries	816	+ 64	+ 189
Clothing	506	+ 95	+ 127
Footwear	221	+ 34	+ 38
Iron and steel	635	+ 12	− 27
Crude petroleum*	617	+ 28	+ 272
Textile yarns and fabrics	390	+ 50	+ 67
Industrial, agricultural chemicals	278	+ 93	+ 46
Lumber	259	+ 111	+ 113
Residual fuel oil	231	− 22	− 9
Office machines	202	+ 47	+ 68
Trucks, buses, special vehicles	225	+ 3	+ 47
Coffee	313	+ 138	+ 25
Meat	291	+ 57	+ 44
Sugar	279	+ 117	+ 79
Fish	252	+ 30	+ 62
Fruits and vegetables	226	+ 83	+ 29

** Not seasonally adjusted.*

advance was due to arrivals of strike-delayed goods at East and West Coast ports. In addition, a portion of the value increase reflected higher prices resulting from the December 1971 currency revaluations by the United States' major suppliers of consumer goods—Japan and Western Europe.

Automotive arrivals made up approximately one third of the increase in imports of consumer goods from last year's first quarter. Arrivals of passenger cars from Canada, after a large advance in 1971 which stemmed primarily from U.S. demand for compact and subcompact models produced north of the border, rose further in January-March. Continued buoyancy in U.S. car sales boosted these entries $100 million above last year's first quarter level, which in turn had been heightened by arrivals of cars delayed by the General Motors strike in the preceding quarter.

Although the pattern of passenger car imports from Western Europe and Japan was erratic in 1971 because of dock strike disruptions, purchases for the year recorded a steep increase over the preceding year. Arrivals again rose vigorously in January-March, mostly on the strength of greater receipts from Japan. Foreign car sales in January-March accounted for 15 percent of total sales, about the same as in the year 1971.

The rise in nonautomotive consumer goods imports was led by a sharp advance in arrivals of clothing. Purchases of radios and television sets, especially from Japan and Taiwan, climbed substantially, reflecting strong demand and the continuing shift of production to foreign subsidiaries utilizing parts and subassemblies previously exported from the United States.

Recovering from their fourth quarter decline, entries of industrial supplies reached $4.8 billion in January-March. After a steady rise throughout last year, crude petroleum arrivals increased again. Expanded U.S. requirements and reduced domestic production, along with lower tanker rates, helped account for the continued advance. Purchases from Canada, Nigeria, Libya, and Venezuela rose vigorously.

Reflecting a high level of construction activity and advancing prices, the value of lumber imports, mostly from Canada, was $100 million above the first quarter of last year. The proportion of U.S. lumber consumption accounted for by imports has risen steadily in the past several years, reaching 17.2 percent in 1971. Imports of industrial and agricultural chemicals expanded on the strength of larger entries of manufactured fertilizers from Canada and organic chemicals from Western Europe and Japan.

After peaking in April-June 1971 when inventory building in anticipation of a possible steel strike was at its height, imports of steel declined in the following two quarters as deliveries were interrupted by dock strikes and excessive stocks were worked off. In January-March 1972, steel imports were marginally above last year's fourth quarter, but were lower than in the corresponding period a year ago. On the other hand, arrivals of nonferrous metals, mainly aluminum and nickel from Canada, rose strongly this year.

Entries of capital goods from abroad advanced by one third to $1.6 billion. The large expansion in machinery imports was probably stimulated in part by the acceleration in U.S. plant and equipment expenditures beginning in the fourth quarter of last year. Strike makeup arrivals and higher prices as a consequence of the currency revaluations also added to the increase.

Largely reflecting arrivals of computer components from new production facilities in Canada, imports of office machines advanced strongly. Textile machinery imports from Germany were sharply higher as U.S. demand for knitting equipment remained strong. Entries of power machinery and switchgear, agricultural tractors, and electronic components added further to the rise.

Farm imports strong

Following an abrupt downturn in the fourth quarter during the dock strike, food and beverage entries soared to $1.8 billion in January-March. Heavy consumer demand stimulated a sharp increase in fish imports over January-March 1971, while the strong advance in sugar purchases was related mainly to inventory rebuilding. Higher prices magnified the import expansion in both commodities. Purchases of meat and alcoholic beverages also rose. Coffee imports increased by 17 percent in quantity, but the rise in value was considerably less because prices were substantially below those of a year ago.

—Bureau of International Commerce

DOMESTIC BUSINESS REPORT

- Productivity can deflate inflation
- Marriage and divorce show new patterns
- Women in business subject of conference
- Overseas job information fairs may continue
- New industry could come from food research

Improved Productivity Will Deflate Inflation

"As the driving force behind the American economy, improved productivity can free the Nation from inflation and from controls and make us a more competitive nation in the international world of trade," Price Commission Chairman C. Jackson Grayson has asserted.

Reexamining productivity

Grayson told the Joint Economic Committee recently that the Price Commission believes the term "productivity" must be reexamined, and a new, more comprehensive definition of the term arrived at.

"The narrow, conventional output-per-manhour concept of the term must be expanded to include the inputs of the psychologists and the sociologists, thereby to identify quality of work as an integral factor in quantity of work, or quantitative output," Grayson declared.

He said the Price Commission further believes that management and labor, in collaboration, can jettison old rigidities and inflexibilities and, aided by Government, could quickly catch up with, and surpass the growing productivity gains abroad.

The Price Commission Chairman offered the following recommendations to the Joint Economic Committee:

- Development of service productivity definitions, measurements and methodologies. There are as yet no truly valid measurement devices for determining productivity in this vast area, comprising almost two thirds of the U.S. work-force.
- A productivity information campaign for the business community. The Price Commission proposed that a reputable communications organization be retained to develop and produce a comprehensive in-depth productivity information campaign. The objective should be to inform the American business community of the critical importance of significantly increased American productivity and suggest ways to achieve it.
- A similar campaign for the labor community.

Throughout the spring of 1972, Grayson said the Commission developed a new set of industry-wide standards for productivity measurement, which were inaugurated May 1. These Standards were compiled from Bureau of Labor Statistics figures, and figures from other sources in industry and government. They will provide a standard set of productivity figures for most of the categories in the Standard Industrial Classification codes.

All manufacturing and construction companies are required to use the new industry standard productivity figures, Grayson explained. If, in a given industry category, the standard figure is three percent, any company with productivity higher than three percent may retain the residual amount provided the increase does not exceed the limitation of its base period profit margin.

Profit regulations

Under Commission regulations, a company is not permitted a profit margin that exceeds the average margin of the best two of the past three years. This profit margin is computed as a percentage of sales. Thus, companies are rewarded for productivity gains up to the profit margin limit.

Any company with productivity figures below industry standards will be motivated to improve, to get its productivity up above the industry standards so it can reap the rewards of being over, the Price Commission Chairman explained further.

Grayson said the new industry-wide standards will reduce the average price increase granted by the Commission. He also said it would reduce the administrative workload for both the companies and the agency.

Military Jobs Related To Civilian Experience Listed In New Manual

A guide for employers seeking to hire returning Viet-Nam-era servicemen is now available.

The guide, published by the Department of Defense as part of President Nixon's Jobs for Veterans Program, contains complete information on all the military jobs which may have been held by members of four branches of the Service—the Army, Navy, Marine Corps and Air Force.

Each occupation held in each Service is listed together with a series of civilian jobs to which they most nearly relate, pointing out to prospective employers where they might be able to find personnel already trained or partially trained to step into civilian openings.

The guide also groups the military specialties under civilian job categories for cross reference.

These listings are expected to help employers utilize fully the past military training and experience of veterans.

Copies of the manual, *Military-Civilian Job Comparability Manual*, are available to employers at $3.75 from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402.

Marketing Plans Will Change To Incorporate New Marriage-Divorce Patterns In Nation

An unprecedented modification of life styles and values is reflected in a new Census Bureau study of marriage and divorce.

American women are waiting longer to marry for the first time, but are divorcing and remarrying at a faster pace, the study reveals.

Study sponsor

"Perspectives on the Recent Upturn in Divorce and Remarriage," is the title of the study which was financed by the National Institute of Child Health and Human Development, National Institutes of Health.

It covers a span of 50 years of marriage, divorce and remarriage and notes that it is common knowledge among demographers that the number of marriages has risen by about one third since 1960.

However, many are unaware that the proportion of women remaining single in their earlier twenties also has risen by about the same percentage during the same period.

"A key development behind this paradox," the study says, "is the upturn in divorce and subsequent remarriage during the 1960s and early 1970s," a period in which the annual number of divorces rose by 80 percent and the annual number of remarriages by 40 percent.

The study makes the following points:

► About 25 to 29 percent of women in their late twenties or early thirties today may be expected to end their first marriage in divorce sometime during their lives. This is somewhat below the level of one divorce in every three marriages, which is sometimes claimed.

► Approximately one fifth of the women between 27 and 32 years of age in 1971, whose first marriage ends in divorce may be expected to remarry and end that marriage in divorce.

► Combining the 25 divorces per 100 women after the first marriage and five divorces after remarrying, yields a projected total of 30 divorces in a lifetime per 100 women born in 1940 through 1944.

► Divorces that occur after remarriage seldom increase the proportion of women who have ever been divorced. The reason is that an estimated 95 percent of such divorces, according to data for women born in 1920 through 1924, are not the first divorce the person has experienced.

—Census Bureau

Ombudsman For Business

Businessmen who need assistance in their dealings with the Federal Government now have a central office in Washington, D.C., to write or call for information, suggestions, or even for registering complaints—the Commerce Department Ombudsman for Business.

All inquiries should be addressed to the Ombudsman, Thomas E. Drumm, Jr., Special Assistant to the Secretary, U.S. Department of Commerce, Washington, D.C. 20230, or call 202-967-3178.

MAPPING PLANS—*Mrs. Peter G. Peterson (left), honorary chairman of the National Conference on Opportunities for Women in Business, and Mrs. Inez Kaiser, national chairman of the conference, discuss plans for the June meeting.*

First National Conference To Help Women Go Into Business Set For June

The ways and means not only to stimulate all women to enter business, but also to help them enter the mainstream of the American economy will be the subject of a national conference to be held in Washington, D.C., June 7-10.

First of its kind

The conference, the National Conference on Opportunities for Women in Business, is the first of its kind to be concerned with women in business in the United States, and in particular with minority women. More than 500 women from the field of business and from those indicating an interest in going into business are expected to attend the Office of Minority Business Enterprise-sponsored event at the Sheraton Park Hotel.

The conference chairman, Mrs. Inez Kaiser, a businesswoman as well as a consultant to OMBE, indicates that there is deep concern for the need to give women—with special stress on black, Mexican-American and Indian women—the facts they should have and the know-how necessary to enter the field of business.

"Through this meeting," she said, "women will have the opportunity to identify with women who have made it in the business world, and who intend to tell it to the attendees 'like it is.' "

All women who try to be entrepreneurs have it hard, Mrs. Kaiser pointed out, and minority group women have it even harder. They don't even have the same opportunities as other women.

Mrs. Peter G. Peterson, wife of Commerce Secretary Peterson, is serving as honorary chairman for the conference. Mrs. Peterson has hopes for the outcome of the meeting.

"It is going to provide meaningful insight into some of the difficult problems businesswomen face," she said, "and workable solutions to help solve them."

The conference goals include identification of barriers to successful business enterprise for existing and potential businesswomen and the development of a strategy to eliminate such barriers.

Key women to speak

Women attendees will hear addresses from key Government officials, the corporate industry and businesswomen from across the country. Realistic business opportunities will be identified for women. Management and technical assistance means will be explored, including how to begin, organize and develop a profitable business, as well as first-hand knowledge of day-to-day operations of a business.

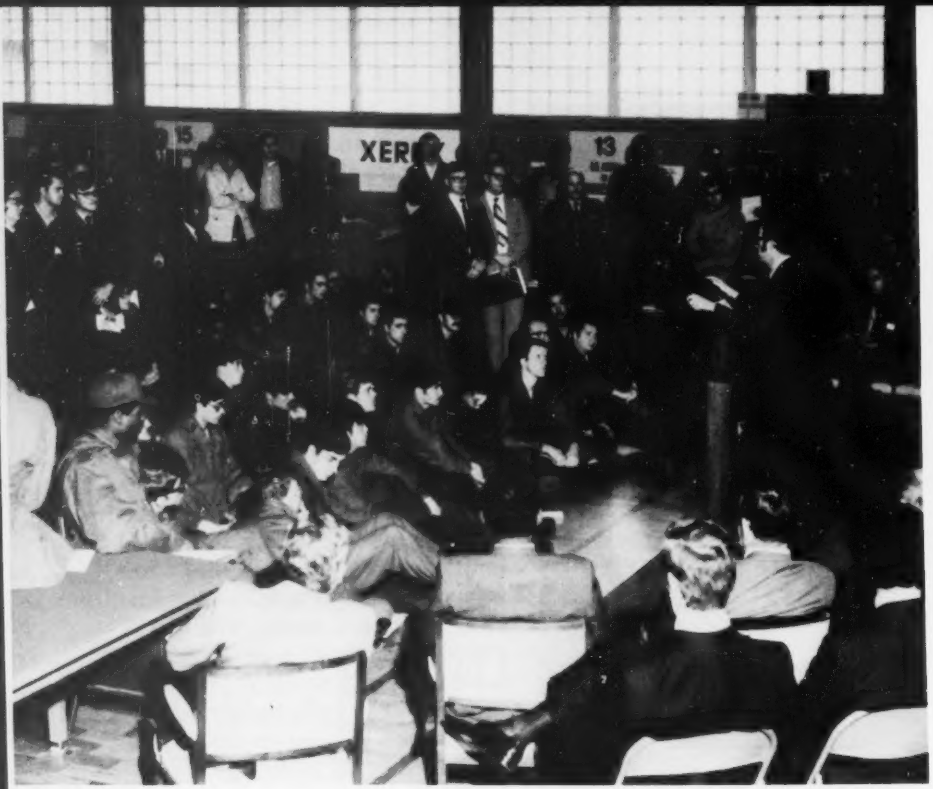
Conferees will get a chance to review the business development process and to learn about the role of the Federal Government, and what it is doing to encourage women in business. Special emphasis is planned on motivating young minority women to seek careers in business.

"Along this line," said Mrs. Kaiser, "we hope also to encourage more young minority women to enter the field of business education so they will be better prepared to open businesses."

John L. Jenkins, director of the Commerce Department agency, OMBE, that is sponsoring the National Conference on Business Opportunities for Women, said that this conference should build a framework under which OMBE can recommend a course of action to bring women into the business mainstream.

"More women need to be given this chance," he said, "and we hope that this is a beginning to letting those women already successful in business to share experience and information with those women who may be businesswomen tomorrow."

—*Office of Minority Business Enterprise*



EUROPEAN JOB FAIR—*Servicemen are shown at an orientation session of one of the Job Information Fairs conducted in Europe. After orientation the servicemen visited individual employers and job counsellors to learn U.S. job information.*

Business, Government Give Full 'Vote Of Confidence' To Continuing Overseas Job Information Fairs

Expressing a unanimous vote of confidence in overseas job information fairs for servicemen returning to civilian life, key representatives of more than 20 major corporations in the United States committed themselves to continuing this kind of assistance for the 'boys over there.'

Additional fairs

At a meeting held last week in Washington, D.C., between the Assistant Secretaries for the Armed Services and the leaders of the top corporations involved in the first pilot job information fair program held in Europe this spring, plans were discussed for holding further fairs in the Far East and in Europe.

According to Roger T. Kelley, Assistant Secretary for Defense and chairman of the meeting, these fairs could probably be planned for late summer or early fall.

The first overseas job information fairs were held between March 27 and April 7 in Germany, co-sponsored by the National Jobs for Veterans Program and the Department of Defense.

Twenty-two sessions of job counseling were held in all, in two-day fairs that visited four European locations: Frankfurt, March 27-28; Kasierlautern, March 30-31; Stuttgart, April 3-4; and Nuernberg, April 6-7.

In all, more than 6,000 soon-to-be veterans were reached with the job information, learning the story of the employment situation in the United States "like it is," and discovering the best methods for going about obtaining jobs when they got home, including veterans benefits that would help them find the employment or training they wanted.

Main objectives

The main goals of these three-programs-a-day, 22-day sessions for the soon-to-be separated servicemen were to give these "GIs" advance job counseling, to acquaint servicemen with the employment status in the United States, to emphasize career opportunities that are available in a variety of industries, and to alert them to the skills, education and training they will need to find jobs.

Personnel representatives from 19 of America's major business firms and associations participated in the counseling sessions, together with officials from the National Jobs for Veterans Program, the Department of Defense and Labor, the Office of Education, the Military Services and the Veterans Administration.

James F. Oates, Jr., National Chairman of the Jobs for Veterans Program, was on hand for the opening session.

U.S. business participating in the program included American Telephone and Telegraph Company, Bankers Trust Company, Cummins Engine Company, General Electric Company, General Motors Corporation, Goodyear Tire and Rubber Company, Howard Johnson's, International Business Machines Corporation, J. C. Penney Company, Metropolitan Life Insurance Company, Mobil Oil Corporation, Richard Clarke Associates, and the Xerox Corporation.

Organizations that participated included American Bankers Association, American Hospital Association, International Association of Chiefs of Police, National Association of Home Builders, National Urban League and the National Association for the Advancement of Colored People.

Each business and organization representative participating in the program acted as a spokesman for his company and the industry his company represented, outlining present and anticipated manpower demands.

Associated with companies that hire in all parts of the country, the representatives also were able to brief servicemen on the employment situation in different states and the metropolitan areas.

No actual hiring

Although company and association representatives were only giving job counseling and information—no actual hiring was ever planned on-the-spot—some job referrals did take place.

The bulk of the servicemen attending the fairs were Army personnel, but servicemen did attend from all over Europe and several were from other branches of the service.

Business and associations found the fairs extremely rewarding. Each felt that this had been a unique opportunity to meet with the servicemen on their own ground and to present the complete story to them—how to re-enter the labor market, how to develop the skills and abilities that would help them.

The servicemen attending found the fairs equally satisfying. Several were surprised that business and the United States Government had been concerned enough about their welfare to present this kind of a job counseling session, which told it "like it is."

At nine of the 22 sessions, a survey questionnaire was distributed to attending servicemen to get their opinions of the sessions. Eighty-seven percent of those questioned found the fair "very or somewhat helpful."

Ninety-nine percent felt "the fair should be held again," clearly indicating that the primary audience found this type of program of great assistance.

JOB SEEKING—*At left Bernadette McCann, Bankers Trust, Assistant Treasurer and Veteran Recruiter, is shown interviewing job seekers at a Veterans Job Fair. Discussing job situation in upper right picture are (from left) Lt. Gen. Willard Pearson, Commanding V Corps; Maj. Gen. Frederic E. Davidson, USAREUR Deputy Chief of Staff Personnel, and James F. Oates Jr., JFV National Chairman.*

Asked about his impression of these job information fairs, Raymond A. Boyce, Director of Public Affairs for the National Jobs for Veterans Program and one of the participants in the overseas project, said that he can't "get over the thirst the 'GI' has for good information."

Boyce believes that in this type of job counseling program the Government has really struck upon something that is accepted by both business and the about-to-be-separated servicemen as a worthwhile endeavor.

"The willingness of these companies to go into a military setting and talk to the soon-to-be veterans established a firm relationship on both sides," he said.

Boyce also pointed out that industry was surprised at the high calibre of the individuals who came to the counseling sessions. "They not only talked with enlisted men and draftees who were concerned about their futures, but many had college degrees—even masters degrees. And some were Armed Services careerists about to retire, with all sorts of skills ready to offer business."

Boyce also felt it important that businesses cared enough about these fairs to pay their own hotel bills and meals, and to donate the time of their personnel on their payrolls for a two-week period to make these counseling events a success.

Comments from the servicemen themselves included:

- "I think they've finally come through with something that could greatly benefit the GI and should continue."
- "This program is good. It should be mandatory for people leaving the service."
- "Fantastic idea. Should be continued in the future."
- "Extremely helpful to me. Suggest holding one every six months."
- "Both the Army and the companies involved are to be commended for this Fair. The representatives were personable, knowledgeable, and more important *honest.*"
- "The Job Information Fair has shown me several ways of seeking different types of jobs and how to confront the job. I must say it was a very worthwhile program."
- "I think this 'fair' should be expanded. It's nice to know someone cares."

And all participants in these job information fairs have recommended—to a man—that more overseas job information fairs be set up as soon as possible.

—*National Job for Veterans Program*

IRRADIATED POULTRY—*Included in the display on this food plate is a chicken leg preserved by gamma radiation at the U.S. Army Laboratories at Natick, Mass.*

Possible New Industry Emerges From Irradiated Food Research

New disclosures on the application of atomic energy in its beneficial forms to the preservation of food products enhances the prospect that it may eventually be of far-reaching importance to food processing and other industries, and also become an important factor in world trade.

Optimistic report

An optimistic report on the possibilities of using ionizing irradiation on specific meat, poultry and seafood items included in rations for U.S. troop has emerged from a study made by Commerce's Bureau of Domestic Commerce under contract with the U.S. Army Natick Laboratories at Natick, Mass.

The purpose of the study was to determine the extent to which the use of radiation processed food products would help fulfill the Army's aim of providing high quality, nutritious food to maintain the health, combat effectiveness and morale of troops.

The report concludes that in fiscal year 1968 the cost of processing and distributing food to U.S. troops in South Vietnam could have been reduced by about $18 million if five food items processed by radiation had been available to replace of the same ration items in frozen and chilled form. The military items were canned chilled ham, six-way frozen beef, and frozen chicken, pork, and bacon.

Aside from dollar savings, the report emphasizes, there were other potential benefits such as savings in time and manpower in food preparation, lowered incidence of food-borne diseases, flexibility in use, and the consequent gains in combat effectiveness and troops morale.

Tests made at military establishments in the United States, the report says, show that troop acceptance of irradiated meat, poultry, and seafood items compare favorably with that of the same items in fresh and frozen form. In fact, troops found irradiated foods decidedly superior in taste and quality to the same foods thermally canned.

Other points made by the report include the following:

► Meat, poultry, and seafood Class-A troop rations require refrigeration from point of issue to consuming unit, whether shipped frozen or chilled. These perishable foods are potentially replaceable by the same items in radiation processed form, which could be distributed as non-perishables and handled as stable shelf items without refrigeration.

► The lower distribution cost of non-perishables compared to perishables is a significant factor in the cost-benefit analysis of irradiated foods. Also in comparing non-perishable B-rations with irradiated foods, the latter in some instances have lower distribution costs. The savings in distribution costs for irradiated foods would vary for different areas, but would be particularly significant for overseas shipments to Southeast Asia.

► In comparing the estimated cost of six irradiated foods with the same standard military items shipped to a breakdown point in South Vietnam, all the irradiated foods stand out as lower-cost items in relation to the same items frozen; four in relation to the same items thermally canned, and two in relation to the same items dehydrated.

► The study demonstrates the definite advantages of using irradiated foods in troop feeding. As non-perishables of excellent quality, they would have great military value under combat conditions involving supply routes less protected than those in Southeast Asia.

► Uncooked meat products are usually heated to 150 degrees Fahrenheit internal temperature prior to irradiation to inactivate the naturally present enzymes to prevent autolysis or self-digestion. Aside from the advantages derived from this blanching process in reducing shipping weight and space, and the consequent savings in distribution costs, there are a number of other significant benefits from the blanching process.

► Since less heat is required for enzyme inactivation than for canning, at the present technological stage of food irradiation a medium-cooked piece of steak could be delivered. As research goes forward, perhaps another method to inactivate enzymes will be found that will enable a "rare" steak to be packed. But whether rare or well-done, it would be recognizable as steak when served, which is not true of thermally-processed canned meat.

► Where space and mobility are at a premium for field systems, elimination or reduction of refrigeration requirements is desirable. Use of irradiated foods, therefore, increases the capabilities of a field feeding system.

► A soldier so far from a kitchen that he must prepare his own meal would have to rely on combat rations, even though he might not actually be in combat. In this kind of situation, irradiated meat, such as sliced meat, steak, etc., could be warmed over a fire very quickly and would be highly acceptable.

► A soldier on patrol or on reconnaissance, who currently has to eat canned or unconstituted dehydrated rations, could eat precooked irradiated meat directly from its flexible package, or he could carry bread and meat sandwiches, hermetically sealed and irradiated, and under the circumstances and alternatives the food would be highly acceptable.

► Widespread use of irradiated meats for troops could reduce the number of line items carried in the Federal Supply Catalog, with consequent simplification of all procedures from procurement to consumption and dollar savings. Also, savings would be realized through eliminating numerous canned meats which are back-up items. Although frozen and chilled meats are definitely preferred, back-up items now must be available for use where refrigeration is lacking.

► Use of irradiated meats could reduce the incidence of salmonellosis and other food-borne diseases, such as botulism or trichinosis, since the radiation at prescribed doses kills the responsible organisms. Salmonellae contamination is one of the greatest causes of food-borne diseases, and frozen meats and poultry are particularly susceptible to it.

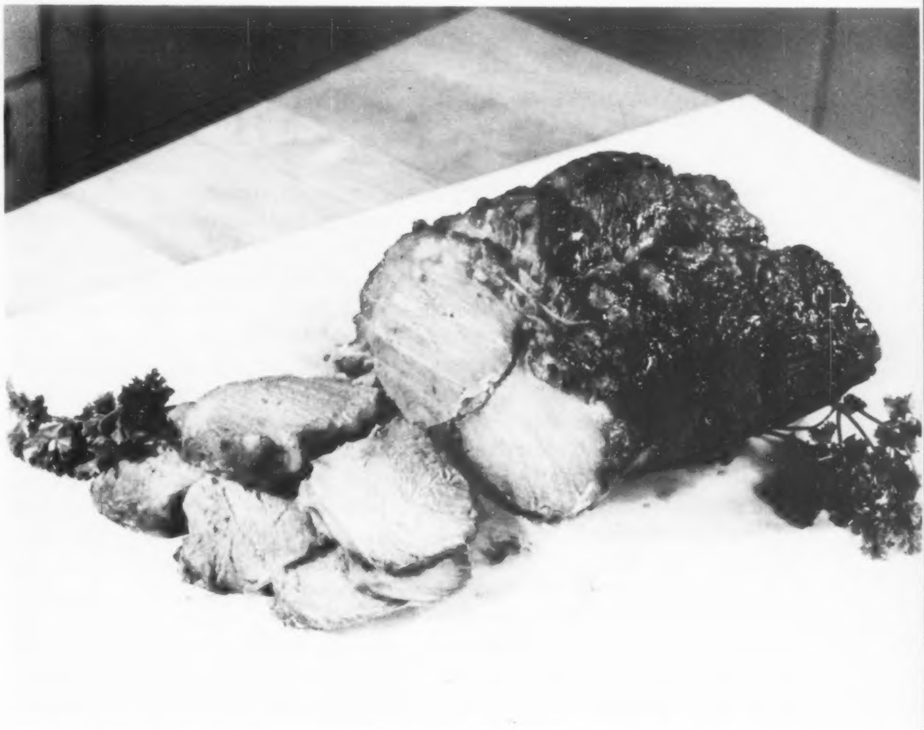
The report comments that all of these factors would benefit combat effectiveness, and that military units "could be much more mobile and flexible in their operations due to the reduced logistical problems resulting from the use of irradiated foods."

Although the technology for irradiation of foods has been essentially completed, irradiated foods at present are not available public consumption in the U.S. And in consequence, of course, they are not available for feeding troops.

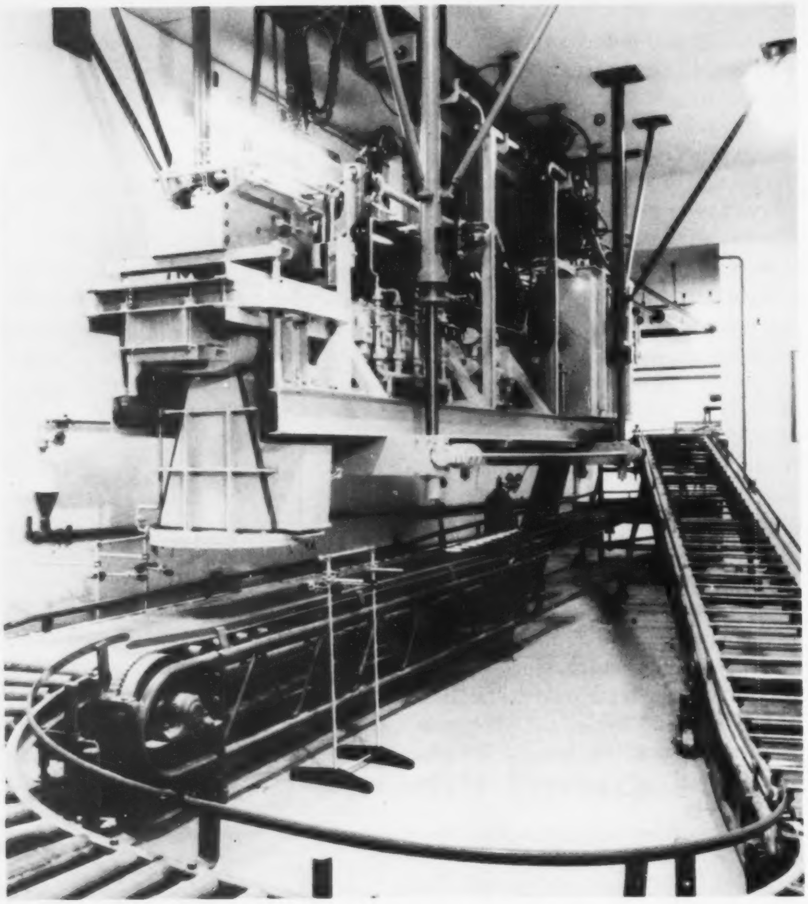
Under present Federal food regulations, commercialization of food irradiation awaits approval by the Food and Drug Administration of the irradiated food products. FDA must be assured that the irradiated foods are wholesome and safe for human consumption.

Accordingly, the wholesomeness studies are continuing by the Army and the Atomic Energy Commission to demonstrate compliance with Federal food laws. The wholesomeness studies involve extensive feeding of irradiated and controlled foods to several generations of animals accompanied by thorough biological examination.

At this time petitions are being prepared by the AEC to obtain



IRRADIATED MEAT—*This roast (radiated by U. S. Army Laboratories) at Natick, Mass., provides an indication of the appearance of meat subjected to this method of food preservation. The target date for FDA clearance is 1975.*



IRRADIATION PROCESS—*This electron accelerator of Varian Associates, manufacturers, Palo Alto, Calif., is one of the forms of equipment which may be used to irradiate foods. Commerce has issued an optimistic report on the process.*

FDA clearances for strawberries irradiated to prevent decay and for papayas from Hawaii irradiated for insect disinfestation.

On March 1, 1971, the Department of the Army awarded a contract to the Bio-Test Laboratories of Northbrook, Ill., for a three-year animal feeding study to demonstrate the wholesomeness of radiation sterilized beef. The target date for presenting a petition to the FDA for clearance of irradiated beef is 1975.

At present, the FDA has approved wheat and wheat products irradiated for insect disinfestation and white potatoes irradiated for sprout inhibition.

Scientists concerned with the food irradiation program indicate that, once the beef petition is cleared, a number of other foods now in the mill will be readied for clearance, and a firm basis for the commercial production of irradiated foods in the U.S. will have been established.

Astronauts on the Apollo flights 12, 13, 14, and 15 ate irradiated bread, and on Apollo 14 and 15 they used the bread for inflight sandwich preparation.

Meanwhile, the use of irradiated food products cleared for human consumption in different countries is expanding, and this opens up prospective export markets, not merely for irradiated foods, but for the means to produce the foods, such as the technology, instruments, equipment, and the like. Various countries interested in irradiated foods are looking to the U.S. to supply these requirements, and thus a large potential exists in this area.

Thus far 27 regulations, covering 15 different food items, have been approved in eight countries. Sixteen of the clearances are for unlimited sale and distribution, while 11 permit experimental lots to be sold in restricted quantities.

Eight-country clearance

Irradiated potatoes have been cleared for sprout inhibition by eight countries, irradiated onions by four countries, and irradiated wheat for insect disinfestation by three countries. Other food items cleared include strawberries, asparagus, cocoa beans, mushrooms, shrimp, spice, poultry, and a series of food categories including more than one product, such as dried fruit, fruits and vegetables, dry food concentrates, etc.

Countries besides the U.S. that have cleared various irradiated foods for human consumption are: Canada, Russia, Denmark, Hungary, Israel, The Netherlands, and Spain.

Radiation sterilized foods are believed to hold special advantages for many less-developed countries in which refrigeration facilities are inadequate.

Specialists well-informed on the food irradiation program are convinced that these foods offer a wide variety of advantages as a supplement to refrigeration in food preservation, and that in time they may lead to the development of a new food service industry, to associated or support industries, and to an expansion of food processing methods.

The study "Potential Radiation Sterilized Military Subsistence Items—Cost-Benefits Analysis" is available at $1.25 per copy from the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia 22151, or from any of the Department's 42 field offices.

—Bureau of Domestic Commerce.

New Advertising Plan Seeks Canada Dollars

A joint summer advertising campaign has been launched by the Federal Government and seven city, state, county and regional tourism promotion groups. The purpose—to attract more visitors to the United States from Canada.

Federal assistance

The campaign has been made possible by Federal grants totaling $73,451 by the United States Travel Service to the state and local groups, enabling them to participate in the move to bring more Canadian dollars into the country.

Grants from USTS will pay 45 percent of the cost of the advertising. The participants will pay the remaining monies.

Acting Assistant Secretary of Commerce for Tourism, James L. Hamilton III, said, "Our research indicates that while the United States is the leading summer vacation choice (after their own country) for Canadians, they still make 73 percent of their summer vacation trips within Canada."

Newspaper ads

Leading Canadian newspapers will print the advertisements of the shared-cost advertising plan to entice more Canadians to spend their vacations in the U.S.

Hamilton said that these advertisements will be in four colors, using a pictorial map format that will show a variety of things to do and places to see in the United States.

A return coupon will offer a brochure of U.S. driving tours and pieces of tourist-oriented material supplied by the participants in the campaign.

Recipients of the new USTS grants include: Minnesota, $2,740; North Dakota, $1,575; New York, $37,636; New Jersey, $9,000; Long Beach, California, $9,000; Essex County, New York (including the Adirondacks and Lake Champlain), $8,550; and The Old West Trail Foundation, composed of the states of North and South Dakota, Montana and Wyoming, $4,950.

Total awarded funds

Including these latest projects, USTS has awarded $407,520 under its matching grants program begun last fall.

USTS, a Commerce Department agency, was authorized to make matching grants up to 50 percent of costs to states, cities and nonprofit public and private organizations under a 1970 amendment to the International Travel Act.

Travel promotion

The agency may make grants for projects designed to promote travel to the United States from abroad, or to improve host services for foreign visitors.

—*United States Travel Service*

Calendar For Businessmen

June 11-12—Vancouver, British Columbia—Pacific Northwest Industrial Development Council annual conference. For information, L. D. Thompson, Port of Portland, Oregon, 503-233-8331.

June 11-16—Rochester, N.Y.—Basic Industrial Development Course, accredited by AIDC, at Rochester Institute of Technology. For information, Robert J. Hall, Rochester Gas & Electric, 716-546-2700.

June 13-15—Cherry Hill, N.J.—Third semi-annual meeting of National Cartage and Warehouse Associates, Inc. For information, Betty DiGirolamo Secretary, National Cartage and Warehouse Associates, Inc., 1030 West Division St., Chicago, 60622.

June 26-27—New York—First Annual Government Data Systems Conference, sponsored by the New York City University, Division of Business and Management. Registration accepted by telephone, William A. Kulok, 212-687-8540.

July 10—Marquette, Mich.—Federal Procurement Business Opportunity Conference at Student Center, Northern Michigan University. For information, Chris Farrand, Administrative Assistant to U. S. Rep. Philip E. Ruppe, 124 Rayburn Building, Washington, D. C., 20515. Phone: 202-225-4735.

July 14—Sheboygan, Wisc.—Federal Procurement Business Opportunity Conference. For information, Frederic A. Seefeldt, Home Secretary for U. S. Rep. William A. Steiger, 201 Post Office Building, Oshkosh, Wisc., 54901. Phone: 414-231-6333.

Note For Federal Contractors

Executive Order 11598, which became effective Sept. 24, 1971, requires Federal contractors and first-tier subcontractors to list job openings with the United States Employment Service.

The primary purpose of this Executive Order is to expand the job opportunities that the Employment Service can make available to Viet-Nam-era veterans.

Business firms that are affected by this directive can make a significant contribution to the Jobs for Veterans Program through voluntary support and implementation of the order's specifications.

Full details of the Executive Order can be obtained by contacting the nearest Employment Service or Regional Manpower Administration office.

SCIENCE & TECHNOLOGY REPORT

- New technologies needed to regain lead
- Cure to ecology question requires solid knowledge
- Computer tape standards seen boon for data exchanges
- Fishing industry hits highest dollar catch
- Patents of special interest

New Technologies Needed To Regain Lead

Continued deterioration in the nation's trade position is "even more serious than the overall trade deficit might indicate," Dr. James H. Wakelin, Jr., Assistant Secretary of Commerce for Science and Technology, says. "The problem is directly related to our loss of leadership in developing new technologies," he told a recent International Management and Development Institute seminar in Washington.

He referred to the deterioration since 1967 from surpluses of $5-7 billion to last year's deficit of $2.0 billion, the first red ink in this ledger since 1888.

Citing the various categories of industry which deteriorated seriously, the Commerce official pointed out that technology-intensive manufactured products, including chemicals, all types of machinery, all types of transportation equipment, and scientific and professional instruments and controls, also suffered.

"The production of technology-intensive products absorbs close to 80 percent of all scientific and engineering manpower working in manufacturing," he said. "The industries manufacturing them account for some 85 percent of all industrial R&D. The skill level of technological workers is some 20 to 25 percent higher than in other industries.

Surpluses yielded

"The technology-intensive category is the only product group that historically and consistently has yielded surpluses which covered the deficits in other commodity groups as well as deficits arising from other U.S. financial transactions with foreign countries," he added.

Dr. Wakelin said "the most disturbing" is the softening in these "technological-intensive" products. The primary reasons for this trend, he said, "are that by now U.S. imports of these commodities have reached the level of about two-thirds of U.S. exports (in 1960 they represented only about 25 percent of U.S. exports) and their growth continues to exceed the growth of our exports of these commodities by more than 100 percent.

"A declining position in the balance between exports and imports of automobiles has accounted for the major part of the overall decrease in our surplus in this category. But what is significant to me is that, considering the trends in other products, our surplus still has not increased," Dr. Wakelin said.

"Given this importance of technology-intensive goods to our world economic position, I believe we have reason to feel concern over the U.S. performance in two areas —productivity and the generation of new technology through research and development.

"Our productivity performance has been unsatisfactory. Productivity in manufacturing increased 23 percent between 1960 and 1965. From 1965 to 1970, however, it increased only 10 percent. For comparison, during the decade of the 60s, productivity in manufacturing increased 91 percent in Japan, 49 percent in the Netherlands, 43 percent in Sweden, and 37 percent in France. I believe that this sluggish productivity in the U.S. has been a major factor accounting for our decline in competitiveness and, in many cases, profitability," he added.

He pointed out further that although the U.S. maintains a higher level of total R&D expenditures than any other country in the world, other nations, specifically West Germany and Japan, are placing a much higher relative emphasis on R&D for civilian-market oriented technology and economic development.

POWER PACKAGES—*Production of technology-intensive products, such as these microwave oven power packages being inspected, absorbs close to 80 percent of all scientific and engineering manpower working in manufacturing.*

$10.25 billion spent

"Each," said Wakelin, "plows back into commercial technology more than twice as much, proportionate to its GNP, as the U.S. does. In 1968, the U.S. spent $10.25 billion for civilian technology while West Germany spent $4.4 billion and Japan spent $5 billion. These expenditures represented 1.2 percent of the United States' GNP, but 2.9 percent of the West German and 2.8 percent of the Japanese GNP."

Because of this increasing competition from other nations combined with the prospect of millions of young people entering the work force and seeking millions of new jobs in the next decade, it is essential to pursue technological and industrial growth to fulfill the nation's expanding economic and social needs, he explained.

To encourage the development of new technology, the Government has outlined the following general concepts in a program "which seems to offer promise," said Dr. Wakelin:

- *Venture research.* In this, the Commerce Department would select industry proposals for venture research support. Cost sharing details "would be worked out in such a way as to balance the risk and encourage a maximum of innovation. The contractor, most likely a smaller technology-based company dealing with civilian markets, would be expected to contribute commercialization efforts in return for proprietary rights that are necessary as a business incentive."

- *Business community research.* This program "would permit broad, joint research efforts by many companies with common goals" such as development of new methods for energy conversion, improved processing equipment for the textile, shoe and paper industries, or new devices for pollution and noise abatement. Where individual private efforts could not meet the problem, the Federal Government would provide the framework for cooperative private efforts with governmental guidance and assistance.

- *Transfer of government technology.* This program involves making available to commercial business government-generated technology. The change in government patent policy, directed by President Nixon last August, providing exclusive patent protection "could, in appropriate circumstances, lay the foundation for greater utilization" of this particular technology. "I believe," said Dr. Wakelin, "we should explore a patent rights policy on government R&D contracts which would reward the contractor for commercial exploitation of the technology."

"Considerations of improving productivity and employment, increasing foreign competitiveness, and bettering the human environment are increasingly complex and, at the same time important," Dr. Wakelin concluded. "The development of new technologies is vital in dealing with these problems, and we must fully understand the capabilities of American industry to help in this national effort."

—*Office of the Assistant Secretary for Science & Technology*

DEEP FREEZE—*A frost-covered aircraft brake undergoes extreme temperature testing of 65 degrees below zero after having been heated to 160 degrees. Industries manufacturing such products account for some 85 percent of all industrial R&D.*

Cure To Ecology Question Requires Fact, Not Emotion

If major ecological decisions are made on the basis of adequate knowledge, the nation need not sacrifice economic well-being to attain a high-quality environment, Dr. Robert M. White, Administrator of Commerce's National Oceanic and Atmospheric Administration, said recently.

Delivering the principal address at the dedication of South Carolina's Marine Resources Center at Charleston, Dr. White said:

"We want clean water, clean air, wild rivers, wilderness areas, unspoiled coastal zones. We want to save our marine life and our wildlife, to preserve endangered species, to enjoy the beauty of nature —and more.

"At the same time, we appear to insist upon the independence offered by automobiles, speedboats or cabin cruisers; we want the comfort of air conditioning and the enjoyment of electronic entertainment; we want the ultimate in disposable packaging. We want everything."

Terming this condition "environmental schizophrenia," the NOAA official said the cure, while possible, is not simple.

Residing in fact

"Like the cure of physical disease," he said, "it must reside in fact. It must be based on solid knowledge, not on emotional presumption of consequences. For some of our problems, preservation of the environment must be the paramount consideration. However, there are times when other considerations must be weighed. Obviously, we cannot have it all. Major values must be weighed against each other with infinite care. I contend that, given a basis of knowledge, there is a reasonable expectation that we can have most of what we seek in the way of economic well-being, along with a high-quality environment.

"I see evolving a new kind of national environmental consciousness, and one that I believe is here to stay. It is one that will insist that our governmental and private decision-makers carry out their difficult tasks armed with an adequate base of knowledge."

Dr. White announced a five-point program which NOAA intends to carry out jointly with the State of South Carolina:

- The beginning of a major Sea Grant program, to be undertaken through the University of South Carolina system and Clemson University.
- A $25,000 program, to be executed primarily at the Marine Resources Center, to provide systematic surveys of the fisheries resources of the state and adjacent regions.
- The transfer of the Army vessel *Dolphin*, a fisheries research craft, from NOAA to the Center.
- The establishment of four new 24-hour continuous radio broadcasts over Radio NOAA along the coasts of the Carolinas. The broadcasts provide continuously-updated weather and ocean information. The new facilities will be located at Myrtle Beach, S.C., and Manteo, Cape Hatteras and New Bern, N.C., blanketing the coasts.
- A systematic survey of the tidal current, rivers, estuaries, and bays in the area between Charleston, S.C., and Savannah, Ga., by the NOAA Ships *Ferrel* and *Peirce*.

—NOAA

Computer Tape Standards Seen Boon For U.S.-Foreign Data Exchanges

Multinational U.S. companies should find it easier to exchange magnetic computer tapes with foreign firms as a result of work under way at Commerce's National Bureau of Standards to internationalize standards of measurement for computer tape.

The Bureau's Center for Computer Sciences and Technology has calibrated tapes and heads sent from other countries and has embarked on a program for the international exchange of magnetic computer tapes for comparison of calibrations.

Almost any audio tape will work in home tape recorders because equipment requirements are not severe, users may be uncritical, and most manufacturers try to match their products to prevailing levels of performance. Magnetic tape for computers and recording instrumentation, on the other hand, must meet stringent requirements to work well in the equipment for which it is intended.

Ideally, all computer and tape manufacturers the world over should follow the same engineering standards and standards of measurement, but progress toward this goal requires successive agreements to make use of common standards. The International Organization for Standardization, which is working toward an international standard for magnetic computer tape, requested the National Bureau of Standards to disseminate its standard magnetic reference tapes and the details of the measurement system for use internationally.

Continuing research

In fulfilling its responsibilities to users of computer tape in Government, the NBS Computer Center conducts a continuing program of research on characterizing magnetic tape. The expertise developed at the Center has been employed by the GSA Magnetic Surfaces Laboratory to develop and supply systems for measuring the critical characteristics of computer and instrumentation tape. The existence of the NBS system and the use of GSA specifications in Government purchasing encouraged the use of the same system and standards by the United States tape and computer manufacturers and users.

The NBS work on magnetic reference tapes resulted in 1967 in an invitation for an NBS representative to visit the Physikalische Technische Bundesanstahlt, (PTB), which had been assigned the responsibility for making computer reference tapes available in West Germany.

In 1970, members of the Deutscher Normenausschuss made two visits to NBS to observe its work and to discuss the magnetic tape signal amplitude measurement system just developed at NBS. Subsequently the PTB decided to duplicate the NBS amplitude measurement system for its own use and visited NBS again, in 1971, to discuss details of the system and to take part in the calibration of several magnetic recording heads to be used in the German national system.

NBS has been performing correlation studies with England's National Physical Laboratory, which in 1970 was considering undertaking a study of measurement techniques for computer recording heads and tape. NBS and NPL agreed to an exchange of reference measurements and in April 1971 concluded plans for the mutual exchange of unrecorded reference tapes. Several tapes were received from NPL in August 1971 and were returned shortly thereafter with charts and graphs made on the NBS measurement system. NBS has submitted some of its reference tapes for characterization on the NPL system.

In April 1970, a representative of the Canadian Department of Supply and Services visited the Center's magnetic tape laboratories. This Department had purchased an NBS SRM 3200 Reference Tape and was evaluating the feasibility of establishing a facility to certify and clean magnetic tape in Canada.

The NBS Computer Center was visited by two French groups, one in 1970 from a magnetic tape manufacturer and the other in 1971 from a government installation. The former brought samples of his tape, which were evaluated on the NBS measurement system; the saturation curves produced were given to the manufacturer for comparison with those obtained on his own equipment. The second visiting group was from France's Centre National d'Etudes des Telecommunications with whom the NBS measurement system was discussed. An NBS representative also visited these groups to discuss common problems.

In November 1971, NBS was visited by a representative of the Japanese Electronic Industries Development Association's committee for the standardization of digital tape cassettes. He brought samples of cassettes and bulk tape that are now being used as interim standards in Japan, asking that NBS consider these in establishing a primary magnetic tape cassette standard for the U.S. NBS has made initial measurements on these cassettes.

Such cooperation with other countries will expedite the formation of international standards for magnetic tape and will create an atmosphere conducive to their acceptance.

—National Bureau of Standards

Kushner Keynoter At Boulder Joint Measurement Session

Dr. Lawrence M. Kushner, Acting Director of Commerce's National Bureau of Standards, will be keynote speaker at a Joint Measurement Conference June 21-23 at the Boulder, Colo., laboratories of the Bureau.

Daniel V. DeSimone, who headed the three-year U.S. Metric Study and wrote the national report for the Congress, will present a report on the status of pending legislation that would lead to a metric America.

Theme of the conference is "The Role and Value of Measurement."

—National Bureau of Standards

New Weekly Technical Abstracts Available

A new weekly series of technical information abstracts of interest to business is being published by Commerce's National Technical Information Service under the title "Weekly Government Abstracts."

This subscription series of newsletters reports on technical advances such as the testing of materials and processes now in use, development of new techniques and methods, ways to improve existing products, methods, and the modification of materials and processes.

The five abstracts and their cost are:

- Environmental Pollution & Control ($22.50 annually)
- Computers, Control & Information Theory ($22.50 annually)
- Materials Sciences ($22.50 annually)
- Transportation ($17.50 annually)
- Management Practice & Research ($17.50 annually)

A discount of $3 is given for each additional category when included with the original subscription. Foreign customers, Canada and Mexico must add $5.75 to categories priced at $22.50 and $4.50 to those at $17.50.

Publications cited are produced by more than 225 U.S. Government agencies and by leading private organizations or individuals with Federal grants and contracts.

Subscriptions to the "Weekly Government Abstracts" may be obtained by writing the National Technical Information Service, U.S. Department of Commerce, Springfield, Va. 22151. *—NTIS*

Fishing Industry Hits Highest Dollar Catch In History In 1971

U.S. commercial fishermen caught the highest dollar value of fish in history during 1971, the National Marine Fisheries Service of Commerce's National Oceanic and Atmospheric Administration reports.

The total catch was five billion pounds valued at $643 million. The value is up five percent from last year, and the volume increased one percent.

Landings for human food were 2.4 billion pounds in 1971, a decline of four percent from a year ago. Landings of fish used for industrial purposes, such as fishmeal and oil, increased by seven percent and reached 2.6 billion pounds.

Shrimp landings set a record, but tuna catches, excluding landings in Puerto Rico, were down 12 percent and salmon landings declined 24 percent compared with the previous year.

Philip M. Roedel, NMFS Director, said the annual per capita consumption of edible fishery products in the U.S. declined from 11.8 in 1970 to 11.2 pounds in 1971. He pointed out that edible fishery products plus those used for industrial purposes account for the equivalent of 57 pounds of fish (live weight) per person annually.

Gulf States' landings of menhaden, an industrial fish, and landings of shrimp along the Pacific Coast States, mainly Alaska, were the largest on record. Declines were noted in landings of anchovies, haddock, halibut, Pacific Ocean perch, swordfish, whiting, surf clams, and dungeness crabs.

Copies of the publication *Fisheries of the United States, 1971*, from which the statistics are taken, are available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, at $1 each. *—NOAA*

Patents Of Special Interest

Recent patents issued by the U.S. Patent Office included:

Liquid waste treatment apparatus. A sewage treatment apparatus having an input tank with mixing and screen filtering means for receiving liquid waste such as raw sewage. The level of liquid waste in the input tank controls a timer which activates a valve to release the screened sewage into a filter centrifuge for rapidly separating liquids and solids in the liquid waste. The solids separated are burned and vacuumed from the filter centrifuge following filtering the liquid through a filter medium located in the centrifuge. A high speed perforated drum centrifuge is lined with a filter material such as sand and the drum may have vanes on its periphery to form an impeller to act in conjunction with a diffuser casing to form a centrifugal pump integral with the filter. Patent No. 3,659,714 issued to Joseph M. Valdespino, Suite E, 3609 Old Winter Garden Rd., Orange County, Fla.

Nuclear-powered ships. A nuclear-powered ship has its collision barriers made water tight and means are provided for filling the barriers with water to act as a shield against radiation in the event of, or as a precaution against, a "maximum credible accident," thus avoiding the need for a permanent shield outside the reactor containment vessel. Coffer dams in the ship can be similarly treated to give protection to the ship's crew. The means for filling the barriers may be a ring main pipe with access fore and aft of the ship or the ship's ballast system may be adapted to provide the filling water for the barriers. Patent No. 3,659, 541 issued to Shephard Rigg, Warrington, England, and assigned to the United Kingdom Atomic Energy Authority, London.

Lock alarm device. A lock alarm mechanism for vending machines and the like is described, including a key-operated latch member securable to a hinged housing door or panel member and lockingly interengageable with a latch bar member resiliently supported with respect to the associated housing member and operative, only during intervals of attempted forcing of the lock such as by prying between the door or panel member and the housing member, to yieldingly move the latch bar member and actuate a self-contained alarm in the housing structure protected. Patent No. 3,659,595 issued to William Wagner, 1800 West 4th Ave., Hialeah, Fla.

Patents numbering 2,705,322 to 2,707,276 expired during April, 1972. Upon the expiration of the 17-year period covered by a patent, the invention passes into the public domain and may be made, used or sold by the public without payment of any royalty, or infringement of the inventors exclusive patent rights.

Trench cutter. A trench-cutting apparatus for cutting deep narrow trenches has a power-driven endless cutter chain on an elongated chain support which is linearly movable in a carrier mounted on a vehicle. In operation the carrier is vertical and is held in position by adjustable rams which permit the cutter to be positioned across the width of the vehicle as required and serve to maintain the carrier in the required plane. Patent No. 3,659,364 issued to Leslie Peter Stuart Wilson, Nassau, Bahamas, and assigned to Gimda Inc., Nassau, N.P. Bahamas.

Abstracts and drawings of patents are published as they are issued in the *Patent Official Gazette* each Tuesday. More than 1,600 patents are issued each week. Trademarks are published in the *Trademark Official Gazette*. Copies of the *Patent Official Gazette* and the *Trademark Official Gazette* may be obtained from the Superintendent of Documents, GPO, Washington, D.C., 20402.

Science Calendar

June 21-23—Boulder, Colo.—National Bureau of Standards, Boulder Laboratories Joint Measurement Conference. Theme is "The Role and Value of Measurement." Sponsored by National Bureau of Standards.

June 26-29—Boulder, Colo.—National Bureau of Standards. Precision Electromagnetic Measurements. Sponsored by IEEE and URSI.

July 17-21—Milwaukee, Wis.—American Society of Civil Engineers Transportation Engineering Conference. Sheraton-Schroeder Hotel. Conference theme is "Policy Issues In Transportation."

August 9-12—Kailua-Kona, Hawaii—International Symposium on Billfish. Sponsored by National Marine Fisheries Service.

Sept. 20-22—Gaithersburg, Md. National Bureau of Standards. IEEE-TAP Environmental Conference.

Oct. 2-6—Gaithersburg, Md.—National Bureau of Standards. Third International Congress on Marine Corrosion & Fouling. Sponsored by the Permanent International Commission for Research on Preservation of Materials in the Marine Environment in cooperation with NBS, Maritime Administration, Office of Naval Research, and Naval Oceanographic Office.

Oct. 30-Nov. 1—Gaithersburg, Md.—National Bureau of Standards. "Dimensional Accuracy in Manufacturing." Sponsored by National Bureau of Standards.

Newsmemo

The showcase is available; fill it with U.S. products and imagination. That's the challenge to American companies seeking to use a U.S. Trade Center between regular exhibitions. Seagrams recently demonstrated what can be done. It turned the Frankfurt Center into a Western stagecoach stop with all the traditional frontier trimmings. Then the firm, entertaining 410 German distributors of food and liquor, organized a bartenders contest supervised by the German Bartenders Assn. and provided Western music with square dancing. Seagrams estimates that $220,000 in sales will result in the next year.

U.S. exporters, looking more and more to World Bank projects, will welcome new Guidelines on doing business with the Bank. The publication spells out regulations on advertising and prequalification; bidding documents; and bid opening, evaluation and award of contracts. Specific items range from rules on bid bonds or guarantees to price adjustment clauses, to language interpretation and preferences for local manufacturers. It all relates to an action area that amounted to $2.5 billion in 1971. Copies of the Guidelines are available at Room 3411 in Commerce Department (The Foreign Projects Reference Room) or by writing the World Bank at 1818 H St., N.W., Washington, D.C. 20433.

Meanwhile, the World Bank is planning to move into new fields in its efforts to promote industrial development in the poorer countries. It will assist small-scale industry and aggressively support new industrial centers, particularly in countries where industrial growth needs stimulus and direction. Emphasis will be on projects that build export earnings for the developing nations, and on others that provide efficient import substitutes in those nations.

A regional office in Beirut, Lebanon, is often the key for accelerated sales by U.S. companies throughout the Near East. U.S. Commercial Officers in Beirut, noting the success of several hundred company reps already at work in the city, suggest that other U.S. firms tap the local pool of businessmen who know the Near East area. Commerce's Lebanon economic desk officer, John Edwards, has further details on their availability. Write him at BIC-896, U.S. Dept. of Commerce, Washington, D.C., 20230.

Success builds on success at Coral Gables, Fla. The city has attracted dozens of U.S. firms to set up their Latin American headquarters there. A new one is the Carrier Corporation's Elliott Overseas division, which is opening its base for Central and South America and the Caribbean with the significant comment: "We have located in an area in which Spanish-speaking people are available. Our Latin business friends feel at home here compared to most other U.S. cities."

International Trade Winds

PLYWOOD — Vancouver Plywood, a subsidiary of Skelly Oil Co., Tulsa, has signed an agreement to establish a $5 million plywood plant in Liberia. Production is scheduled to begin in 1974. Logging, sawmilling and road building operations on Vancouver Plywood's concession areas have already begun.

FISHING—The African International Development Corp. (AIDC), New York, has formed a joint venture with the Cameroon National Investment Society to establish ar industrial fishing complex based in Camcroon. AIDC owns 51 percent of the new firm. Commercial studies preparatory to operation of the complex will be completed in 15 months. The first of 25 planned fishing trawlers will be delivered next month and the shrimp cleaning, freezing, packing, cold storage, boat building and repair facilities should be in operation by 1974.

ENGINEERING — The Lummus Co. division of Combustion Engineering Inc., Detroit, has been awarded a contract by Oberrheinische Mineral-Oelwerke GMBH (OMW) to design, engineer, procure equipment and construct OMW's $130 million Karlsruhe, Germany refinery expansion. Fifteen refinery and treating units as well as storage and off-site facilities, and the latest in water and air pollution equipment are planned. Engineering is now under way for the project, which is scheduled for completion in 1973.

PLANT CONSTRUCTION—Aetna-Standard Engineering Co., Ellwood City, Pa., will build a sizing mill for a quench and temper line at the Dalmine Siderca seamless pipe mill at Campana, Argentina. Installation of the sizing mill is part of the modernization of heat treatment facilities for higher grade pipe. Startup is estimated for the third quarter of 1972.

INTERNATIONAL COMMERCE REPORT

- **U.S.—Soviet trade talks continue**
- **Exhibitors sought for four trade shows**
- **'E' awards to 11 enterprises**
- **U.K. in wake of 1971 decisions**
- **Optimism in El Salvador**
- **Foreign investment role in Philippines**

Major Provisions On Steel Imports Detailed

Key provisions of the recently concluded Voluntary Restraint Arrangement on steel imports into the U.S. are these:

► The previous 1969-71 arrangement is extended in revised form through 1974.

► Steel producers of the U.K. have joined those of Japan and the Common Market nations in undertaking to limit shipments to U.S. markets.

► Growth rate for shipments is 2.5 percent per year.

► There are new, firmer commitments regarding the product mix of shipments.

► Similar commitments cover the geographic distribution of shipments.

The new restraints, announced May 6 by the White House, are the outcome of discussions over the past year between Nathaniel Samuels, Deputy Under Secretary of State for Economic Affairs, and representatives of the Japanese and European Community steel producers. Producers of the United Kingdom, who did not participate in the earlier voluntary restraint arrangement, have joined European Community producers in the new undertaking, which will be in effect for the three year period 1972-74. The eight countries, whose producers participate in the restraint arrangement, accounted for approximately 85 percent of total steel mill products imported into the U.S. in 1971.

Arrangement terms

According to letters of intent received by the Secretary of State, Japanese steel producers will limit shipments of steel mill products to this country in 1972 to a level not exceeding 6,498,000 net tons. In 1973 and 1974, the Japanese producers will increase their shipments by no more than 2.5 percent above the previous year's limits.

The steel producers of the European Community, joined by the United Kingdom producers, will limit their shipments to 8,013,794 net tons in 1972. In 1973 and 1974, shipments will be limited to 8,093,543 tons and 8,295,910 tons, respectively, for an average growth rate of 2.5 percent per annum for the three year period.

The 2.5 percent growth rate is in line with recent growth in the U.S. market. Under the previous arrangement the rate of growth was five percent per year. A statistical summary of the trend of imports as related to the domestic market, and by country of origin is shown in tables on page 34.

The provisions of the renewed undertakings also include firmer commitments regarding the geographic distribution, and product mix of shipments to the U.S. The participants have undertaken to hold shipments to particular geographic areas to the proportions prevailing in the years 1969, 1970,

Trends In Steel Mill Products

Millions of net tons

	1968	1969	1970	1971
Domestic industry shipments	91.8	93.9	90.8	87.0
Exports	2.2	5.2	7.1	2.8
Imports	18.0	14.0	13.4	18.3
Apparent consumption [1]	107.6	102.7	97.1	102.5
Imports as percent of apparent consumption	16.7	13.7	13.8	17.9

[1] Industry shipments minus exports plus imports.

Sources: U.S. Department of Commerce
American Iron & Steel Institute

and 1971. Japanese producers have undertaken to limit shipments to the Pacific Coast to one third of their total exports to the U.S. Total steel imports in 1971 were distributed among geographic regions as follows: Atlantic Coast, 21.8 percent; Gulf Coast—Mexican Border, 22.5 percent; Pacific Coast, 14.7 percent; Canadian Border, 37.9 percent; and Off-Shore, 3.1 percent.

The product mix will be generally maintained in accordance with average shipments in the period 1969-1971. The provisions also include specific tonnage limitations on each of the three categories of specialty steel—stainless, tool, and other alloys. With respect to stainless and other alloy steels, the limitations for 1972 and 1973 represent rollbacks of actual shipments from the levels reached by the participants in 1971.

Another new feature of the arrangement is the participants' undertaking to limit 1972 exports of cold finished bars and fabricated structural steel to a level 2.5 percent above 1970 shipments and to limit growth in 1973 and 1974 to no more than 2.5 percent per annum above the preceding year's limit. Since fabricated structurals, which were not covered in the original arrangement, are not considered steel mill products, the shipment volume of these products is outside the overall quantitative limits established for steel mill products. This fabricated category includes products such as angles, columns, and pillars used in the construction of buildings and bridges. Total imports of cold finished bars were 111 thousand tons in 1970 and 118 thousand tons in 1971. Imports of fabricated structurals totalled 167 thousand tons and 154 thousand tons, respectively, in 1970 and 1971.

The revised arrangement provides for a consultative process through which the U.S. Government or the foreign producer associations may initiate periodic discussions to consider any problem or question which may arise.

The foreign producers have predicated their undertakings on the assumption that the U.S. Government will take no unilateral actions to restrict steel imports or impose other measures having a similar effect, including imposition of new supplemental dutes.

The United States became a net importer of steel in 1959 when a 116-day steel strike interrupted domestic production and resulted in an increase of steel imports to 4.4 million tons in that year as against 1.7 million tons in 1958. Imports followed a sharp upward trend during the 1960s as domestic demand for foreign steel was stimulated primarily by a substantial price advantage of foreign over domestic steel and by a series of strike threats inherent in the negotiation of new labor agreements in 1962, 1965, and 1968. Steel imports in 1968 increased 57 percent over 1967 to 18 million tons, and represented 16.7 percent of the domestic steel market.

In view of the steady increase in steel imports through the 1960s and their impact on the U.S. market, discussions with major steel suppliers were held and resulted in the steel producers of Japan and the European Community undertaking to voluntarily restrain their exports to the United States for the three year period 1969-71. Primarily as a result of the arrangement and the heavy world demand for steel, particularly in Europe, steel imports declined both in volume and as a proportion of the U.S. market in 1969 and 1970. Domestic strike-hedge buying in 1971 again stimulated imports which rose to a record level of 18.3 million tons, or nearly 18 percent of the market.

Origin Of U.S. Imports Of Steel Mill Products

Millions of net tons

	1968	1969	1970	1971
Japan	7.29	6.25	5.94	6.91
EEC, total	7.10	5.20	4.57	7.16
West Germany	3.07	1.93	1.75	2.51
Belgium-Lux	2.12	1.67	1.24	1.98
France	1.20	1.02	.93	1.56
Italy	.27	.14	.14	.56
Netherlands	.43	.43	.50	.61
United Kingdom	1.30	.89	.82	1.36
EEC-U.K., total	8.40	6.09	5.39	8.52
Canada	1.24	.80	1.11	1.27
All other	1.03	.89	.92	1.60
Grand total	17.96	14.03	13.36	18.30

Note: Totals may not add due to rounding of data. Tables prepared by Office of Import Programs, U.S. Department of Commerce.

Progress In Trade 'Normalization' Reported At Talks With Soviets In U.S.

Continuing trade talks between the U.S. and the Soviet Union are making significant contributions to "the possibility of normalizing and expanding the economic relationship between the two countries," Commerce Secretary Peter G. Peterson commented May 18 at the conclusion of a round of such discussions in Washington.

This was just before President Nixon went to Moscow to meet Soviet leaders.

Invitation to Peterson

The Soviet Foreign Trade Minister, Nikolai S. Patolichev, has invited Secretary Peterson for further talks in Moscow at "a mutually convenient time." The Secretary headed a U.S. delegation that included representatives from other departments.

The series began last November in Moscow during the visit there of Maurice H. Stans, then Secretary of Commerce. Officials of the Soviet Foreign Trade Ministry came to Washington in January for detailed talks with U.S. Department of Commerce specialists.

In the round of discussions this month there were more than 30 hours of intensive working sessions at the Commerce Department.

These covered all basic aspects of present and potential commercial relationships, including among other matters: potential levels of trade and the nature of possible trade agreements; possibilities for reciprocal Most Favored Nation tariff provisions; possibilities for reciprocal extension of credit facilities including those of the Export-Import Bank; discussion of the need for credits on grain sales; the Soviet Kama River project; the possibility of U.S. private enterprise participating in the development and sale of Soviet raw materials and other goods; wider availability of business facilities in both the U.S. and in the USSR.

The discussions also touched upon settlement of the outstanding Soviet lend-lease debt simultaneously being negotiated in Washington and the possibility of future grain sales.

The visit was marked by a meeting between President Nixon, Minister Patolichev, and Ambassador Anatoly Dobrynin, at which the Secretary of Commerce and senior White House officials were present. The Minister also met with Secretary of State William P. Rogers.

While in the U.S. Minister Patolichev visited New York for discussions with business and banking leaders, and members of his delegation held a similar meeting in Chicago. The Soviet delegation also visited Florida.

Minister Patolichev said "the negotiations we have had in Washington proved to be helpful and demonstrated willingness of both the parties to work towards improving commercial relationships between them on mutually beneficial and broad bases. I look forward to further meetings with Secretary Peterson and to this end have invited him to visit the USSR at a mutually convenient time."

Secretary Peterson stated that "the discussions were constructive and contributed significantly to the possibility of normalizing and expanding the economic relationship between the two countries and I look forward to my next meeting with Minister Patolichev in Moscow."

OFDI Says Its Investment Allowables To Hold For 1972

U.S. direct investors overseas are being advised that the allowables generally authorized under the Foreign Direct Investment Regulations will be the same for 1972 as they were for 1971. Also, the year-end deadline extensions granted for 1971 will be available again in 1972, and there will be revisions this year in the specific authorization policy pertaining to export credit relief.

Word of such actions is being issued by William V. Hoyt, Director of Commerce Department's Office of Foreign Direct Investments.

The proposed amendments covering them were published in the May 20 *Federal Register*.

The Foreign Direct Investment Program has been in operation since Jan. 1, 1968, as part of an effort to improve the U.S. balance of payments position.

1971 Auto Trade Deficit With Canada: $196.5 Million

Trade under the United States-Canada Automotive Agreement for 1971 showed a U.S. deficit of $196.5 million, compared with minus $195.1 million in 1970.

The trade figures are derived from a joint United States-Canada effort to obtain more accurate figures using the import statistics of each country. In this series the import statistics are basically more reliable because the classification in automotive components and parts is more accurately defined and adhered to than in export classifications.

Additionally, the statistics are based upon transaction values which are the actual values at which the sales are made. The greater accuracy of these figures accounts for their use in the Annual Report of the President to the Congress on the operation of the Automotive Products Trade Act of 1965, prepared by the Bureau of Domestic Commerce, Transportation Equipment Division.

Total exports of automotive products, including tires and tubes ($35.5 million) amounted to $3.8 billion while total imports were $4.0 billion (tires and tubes $7.9 million).

Loss Of American Competitiveness Depicted In Tariff Commission Study

Loss of American competitiveness as compared with other major industrial countries brought the deterioration in the U.S. trade balance of recent years, a U.S. Tariff Commission study notes.

The Tariff Commission's report focuses primarily on two causes most frequently associated with the deterioration of the balance—"inflation and changes in the economy," together with brief consideration of the impact of technology and the effect of multinational corporations.

Effect of inflation

The Commission concludes: "It is clear that inflation has been a substantial factor in the U.S. loss of competitiveness."

The report also points out that another "substantial factor affecting U.S. competitiveness involves a rather subtle change in those characteristics of U.S. industry that are measures of competitive strength. These characteristics include labor skill, low average product age, product differentiation, and scale economies. U.S. exports tend to be concentrated in industries with these characteristics, especially industries with large diverse product lines and rapid market growth. However, changes in trade performance during the 1960s indicate a weakening influence of most of these indicators of competitive strength."

In its evaluation of the import trend recently, however, the report states: "The reverse is true of imports. The U.S. market has been penetrated by imported goods that embody skilled labor and a lower average product age, and that depend on scale economies, industrial concentration and greater product differentiation. Western Europe and Japan have greatly increased the size of their capital plant, the skill of their labor, and the expertise of their marketing, all of which has made it much easier for them to compete in the American markets."

The Tariff Commission's study revealed that: "In the postwar period generally the United States suffered less inflation than the industrial countries of Western Europe and Japan, maintained rates of productivity increase that equalled or exceeded those abroad, and kept intact a strong position for its goods in international markets."

However, the Commission found that this favorable condition changed rapidly beginning in 1965, and cited the following changes in three major price series which occurred in the last half of the 1960s:

Wholesale prices of U.S. manufactured goods were stable during 1960-64 but jumped by 12 percent in 1965-69, the steepest climb in this price index for any other industrial country except Canada.

The index of prices for U.S. industrial raw materials actually fell by 3 percent during 1960-64, but moved up by 10 percent during 1965-69. Other industrial countries straddled the U.S. experience.

The index of prices for exports of U.S. manufactured goods rose only 1 percent in 1960-64, but advanced by 13 percent in 1965-69. "No other major industrial countries except the U.K. and Canada had such large increases in their export prices in the last half of the decade."

Productivity slide

The Commission also studied labor productivity rates during the years 1960 through 1969:

"Coupled with U.S. inflation since 1965 has been a falloff in labor productivity. The rate of productivity gain in U.S. manufacturing was only half as large in 1965-69 as in 1960-64, whereas for most industrial countries productivity gain was greater in the last half than it was in the first half of the decade. Unit labor costs in 1965-69 increased by 16 percent in the U.S., 10 percent in West Germany, 3 percent in France, 2 percent in Japan, and declined by 3 percent in the U.K."

Copies of the Commission's report (TC Publication 473), which is the first of several planned, are available upon request to: Secretary, U.S. Tariff Commission, 8th and E Streets, N.W., Washington, D.C. 20436.

World Traders Can Choose From 8 AMA June Sessions

Eight seminars and briefing sessions offered by the American Management Association during June will give U.S. businessmen insights into various aspects of international trade and finance. Unless otherwise indicated, all will be held at AMA's New York City headquarters.

The program for the month includes:

June 5-9—International licensing.

June 12-14—Fundamentals of foreign exchange.

June 19-20—How to make maximum use of DISC, Waldorf-Astoria, New York.

June 19-21—Orientation seminar on Terms, Credit and Collection in International Trade, Sheraton-Palace Hotel, San Francisco.

June 21-23—Foreign operations under the OFDI regulations.

June 28—Two separate briefings, one on Venezuela and one on Yugoslavia, Delmonico Hotel, New York.

June 28-30—Off-shore financing: sources and methods.

For details, write American Management Assn., AMA Building, 135 West 50th St., New York, N.Y. 10020 or Telephone 212-586-8100.

Trade Fairs, Centers

U.S. Exhibitors Sought For Four Overseas Shows

Air conditioning and refrigeration equipment: Germany. The yearly turnover for air conditioning equipment in the Federal Republic of Germany is estimated at over $200 million and is growing at about 20 percent per year. The commercial refrigeration market is about the same size and is estimated to be growing at 7 to 8 percent per year.

The German recession appears to be ending, and the accompanying increase in new construction will lead to increasing sales of air conditioning equipment. Rising per capita income is stimulating sales of prepared frozen foods and refrigerated dairy products, adding to demand for refrigeration systems.

The U.S. Trade Center in Frankfurt will offer American suppliers of this equipment an opportunity to exhibit and sell their products to a hand-picked audience of buyers at a Sept. 11-15 show.

Total imports of air-conditioning equipment into West Germany were worth $74 million in 1970 and $90 million in 1971. For refrigeration equipment, imports rose from $60 million in 1970 to $72 million in 1971. Imports from the United States remained around 11 percent for the two categories in the two years. The U.S. share is expected to stay at this level for the next few years.

For details, call A. J. Beiring at 202-967-3838, or write him at BIC-946, U.S. Department of Commerce, Washington, D.C. 20230.

Hybrid microelectronic components: Italy. The Italian market for electronic components of all types has been a steady 14 percent, and total annual sales are now estimated at more than $200 million. The hybrid microelectronics portion of the market exceeds $50 million, with sharper increases predicted before 1974.

To help U.S. firms boost their sales in this growing market, the U.S. Commerce Department's Milan Trade Center will mount a Sept. 12-16 exhibit featuring sophisticated hybrid microelectronics, including all types of high-density circuitry and appropriate on-line production items.

While electronics exchanges are just coming into their own in Italy, sophisticated electronic transmission hardware is becoming standard. In 1972, it is estimated that about 10,000 pulse code modular circuits will be installed—by 1974, more than 30,000. It is not difficult to calculate the growth. U.S. manufacturers of minicomputers and peripherals are reporting good sales and expect a 20 percent growth to $475 million in 1972 over 1971's $403 million.

Thirty-three U.S. firms participated in a similar Milan Trade Center show in September 1970 and were rewarded with over $1.5 million in sales. All strongly recommended another show.

For information, call Samuel S. Spaulding at 202-967-3968, or write him at BIC-948, U.S. Department of Commerce, Washington, D.C. 20230.

METALS '72: Italy. To continue to vitalize and support its growing industries, Italy requires the latest special metals, superalloys, and powdered metals, as well as such ancillary equipment as instrumentation and controls for the production and processing of metals, metal casting equipment, metal surface finishing equipment, and physical test equipment.

In 1971, Italy produced less than one half its industrial requirements in these product categories, while importing over $166 million worth of these types of equipment and supplies. Commerce Department market researchers in Italy interviewed experts who indicated that the country's industry is now about 5 to 7 years behind the United States in the various fields relating to metals technology. Because of this situation, Italian industrialists look to the U.S. for their high-technology needs.

To aid U.S. suppliers in penetrating this receptive market, the U.S. Trade Center in Milan has scheduled METALS '72, for Oct. 10-14.

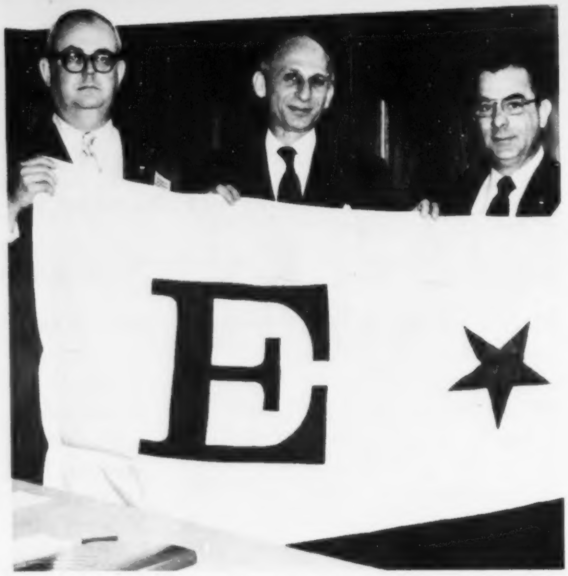
For details, call Gus Duda at 202-967-2434, or write BIC-948, U.S. Department of Commerce, Washington, D.C. 20230.

Printing and graphic arts machinery: Mexico. Fourth largest industry in Mexico, the printing and publishing industry has been accorded priority for development by the Mexican Government. This emphasis is intended to help Mexican publishers export their products throughout the Spanish-speaking world, where Mexico is a major supplier of printed matter.

To capitalize on the opportunities in a market where all but the least complicated graphic arts equipment is imported, the U.S. Department of Commerce has scheduled an exhibition of advanced American equipment for the U.S. Trade Center in Mexico City Oct. 16-20. This event will build upon an outstandingly successful exhibition of printing and graphic arts equipment held in Mexico City in May 1970, at which 35 exhibitors made $1.9 million in immediate sales, with $3.4 million in additional sales within the following year.

Additional information is available from Jim Blow at 202-967-4311, or write him at BIC-952, U.S. Department of Commerce, Washington, D.C. 20230.

ARIZONA WINNER—*Donald W. Fry (right), director, Commerce's Phoenix Field Office, presents "E" award to Arthur L. Gonzales (left), international vice president, Valley National Bank of Arizona, and Earl L. Bimson, bank president.*



STAR IN GULF—*Edward S. Reed (left), general manager, Board of Commissioners of Port of New Orleans, and Harvey H. Loumiet Jr. (right), board president, are shown with Robert P. Beshar, Deputy Assistant Secretary of Commerce.*

Cuban Refugee Firm Among New 'E' Award Winners

A Miami-based institutional and commercial furniture firm, established by a Cuban refugee, is among 11 industries and organizations flying new "E" and "E" Star flags for export excellence.

Calmaquip Engineering Corp., under the direction of its Cuban refugee president Raul Gutierrez Jr., nearly doubled its exports to Central and South America in the period 1968-70 and is studying the possibility of entering the African and Middle Eastern markets. Gutierrez attributes the export success to excellent linguistic capability of the firm's employees, and to advance design of U.S. products and competitive pricing.

CUBAN SUCCESS—*Raul Gutierrez, Jr. (left), president of Calmaquip Engineering Inc., accepts citation from Ambassador William D. Eberle, President's Special Trade Representative.*

Other recent award recipients include manufacturers, a marketer, a bank, a state agency and a port.

E. D. Magnus, Inc. of Chicago, a combination export manager specializing in exports of electronic parts and equipment, received an "E" Star for its continued superior performance in foreign marketing.

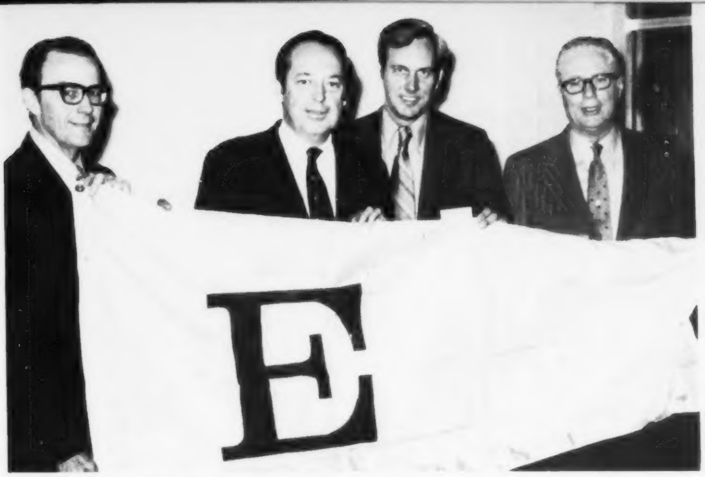
For expanding foreign markets for its electrostatic spray painting equipment and fiber glass reinforced polyester spraying equipment, Ransburg Electro-Coating Corp. of Indianapolis, was awarded an "E" Star.

The Mississippi Marketing Council of Jackson, Miss., and the Board of Commissioners of the Port of New Orleans, were presented "E" Stars at the annual Mississippi Valley World Trade Conference.

In its efforts to promote a demand for the state's products in the overseas market, the Mississippi Council, a state agency, has participated in international trade fairs, foreign trade shows and organized trade missions to Europe and Latin America. It also conducts export seminars and workshops.

The Board of Commissioners of the Port of New Orleans, also a state agency, has in the past three years opened trade development offices in London, Brussels, Panama and Melbourne, and part time representatives have been contacted in Hong Kong and Tokyo.

Other "E" award winners were Burgess Vibrocrafters, Inc. of Grayslake, Ill., manufacturer of insect thermo-foggers and airless paint sprayers; Martin Engineering Corp. of Neponset, Ill., manufacturers of vibrators and material handling equipment; Pellerin Milnor Corp. of Kenner, La., manufacturer of commercial laundry washers, extractors and combination washer extractors; Valley National Bank of Phoenix; commercial banking; Pilling Co. of Ft. Washington, Pa., manufacturer of surgical instruments; and Parr, Inc., of Cleveland, manufacturer of paint and allied products.

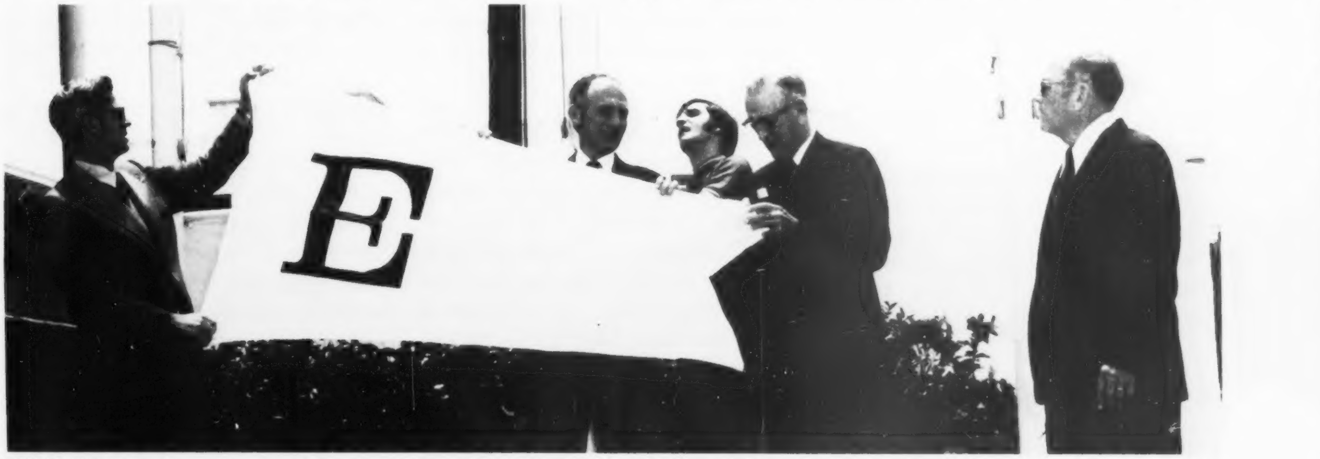


PILLING
RGICAL INSTRUMEN
E

PAR EXCELLENCE—*Parr, Inc., officials (upper left picture) are shown receiving "E" award. From left are Robert W. Miller, Executive Director, White House Conference; Edwin C. Hills, Parr president; James Finneran, manager, marketing research, Eaton Corp.; Charles B. Stebbins, director, Commerce's Cleveland Field Office. Upper right picture shows Pilling Corp., receiving award at plant. From left are U. S. Rep. Lawrence Coughlin, H. Burgess Pilling, board chairman; Robert R. McCaffrey, president; R. R. Riesgo, acting director, Philadelphia Field Office, Brig. Gen. B. F. Compton.*

E
E STAR AWARD

MISSISSIPPI AND MIDWEST—*Left picture shows Robert P. Beshar (left), Deputy Asst. Sec'y of Commerce, presenting "E" Star to Mrs. Dorothy Y. Ferguson (center), manager, Mississippi Marketing Council; Paul Fugate, secretary. Pictured at right Asst. Sec'y. of Commerce Harold B. Scott (left) makes awards to (from left) George Bell, chairman, Burgess Vibrocrafters, Inc.; Frank Reinhard, president, E. D. Magnus; John E. Maxwell, vice president, Ransburg Electro-Coating; Edwin H. Peterson, Jr., president, Martin Engineering; Gerald Marks, director, Chicago Commerce Field Office.*



PELLERIN FLAG—*Pellerin Milnor Corp. officials hoist "E" flag at Kenner, La., plant. From left are Norvin L. Pellerin, president; Robert P. Beshar, Willis A. Pellerin, board chairman; A. W. Walsdorf, vice president of the company.*

U.K. Building For Future After Big Decisions In 1971

This year the United Kingdom is starting the building process to capitalize in 1973 and beyond on the major decision of 1971.

It is a critical year for the Government as it pushes ahead with the European Community legislation and implementation of the new Industrial Relations Bill, struggles to attack the unemployment problem through reflationary measures while the pressures of rising costs and prices are barely subsiding, and wrestles with the seemingly insoluble problem of Northern Ireland.

The interplay between these issues could conceivably impede the country's progress toward becoming fully competitive with its new European partners.

Significant year

Archie M. Andrews, Counselor for Commercial Affairs at the U.S. Embassy in London, says that for American businessmen 1972 is a year to keep a close watch on developments in planning company strategies. Market expansion potential exists today for some, particularly in areas helped by devaluation of the dollar. For others, particularly in some of the industrial equipment lines, sales growth will depend on the increase in growth rate of investment as the economy recovers from recession.

Last year marked a historical turning point in British history. The United Kingdom completed successful negotiations with the six Common Market countries in June for British entry into the European Community and in October the Parliament approved the terms the Government had negotiated. The basic decision has therefore been made and it is now a foregone conclusion that Britain will be a member of the enlarged European Community by Jan. 1, 1973, although the Government will have to maintain a high degree of political skill and tenacity to insure passage of the constitutional changes in British law to conform with terms of the Treaty of Rome.

The anti-Marketeers in both parties have promised to fight the enabling legislation every step of the way as it is debated in Parliament. Already in one instance this saw the government's majority of 112 of last October reduced to 8.

The second major milestone in 1971 was passage of the Industrial Relations Bill, the first basic overhaul of British labor laws since 1926. The new labor legislation became operative in stages starting in October and fully effective on Feb. 28 of this year. Management, labor and government will now start the process of learning to work under the new procedures and relationships established by the bill.

While working on the politically sensitive problems relating to entry into the Community and industrial relations, the Government must continue its fight against inflation and at the same time, faced with the highest unemployment since before World War II, take steps to reflate the economy.

During 1971 the Government took the lead in the fight against wage increases and made considerable progress in reducing the rate of increases from an average of 15 percent to a range of 10-12 percent in the public sector. However, the private sector, which accounts for about 75 percent of the labor force, was not as successful in reducing wage settlements. Nevertheless, by yearend a downward trend was visible in both sectors.

The outlook for 1972 in the public sector is one of continuing improvement in slowing down the rate of wage increases with a "norm" of 7-8 percent appearing as a reasonable prospect.

The government's course is set on reflation of the economy and the measures taken to date seem to be heading the economy toward achievement of the goal of 4-4.5 percent real growth in the year ending mid-1972. In the budget announced for the coming fiscal year the Government is targeting for real growth at a 5 percent annual rate for the 18 months ending mid-1973.

Stimulative forces

Consumer spending and exports should continue to be the main stimulative forces with increases in industrial investment hopefully to follow late in the year if confidence in the economy grows and awareness of the new meaning of British Common Market entry encourages industry to start tooling up for a domestic market roughly four times its present size.

The Government is in a position to move toward greater economic expansion as foreign exchange reserves at the end of 1971 were at the highest level in the postwar period. A strong export performance in 1971 and income from invisibles made a record current account contribution to the U.K. balance of payments. A strong current account surplus is anticipated for 1972 but perhaps somewhat less than in 1971 as the trade surplus may shrink with an increase in imports as the economy picks up.

In absolute terms as well as share of market the United States lost ground in 1971. Against an overall increase in U.K. imports of 8 percent, imports from the United States declined from 1970 by $203 million, resulting in a drop in market share from 12.9 percent to 11.1

percent. This is the second year the U.S. share has declined after reaching a peak of 13.5 percent in 1969.

BUILT BY THE LIVERPOOL WATER WITCH
& MARINE ENGINEERING CO. LTD. LIVERPOOL
SHIPPED BY R-I-E TRANSPORT INC
International Freight Forwarders
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LIVERPOOL TO NEW YORK—*The bizarre-looking craft shown above is a surface dredger developed in the United Kingdom and purchased by New York City for use by the Department of Sanitation in cleaning debris from harbor waters.*

Slow economic growth and a decline in manufacturing investment were probably the major factors contributing to the decline in U.S. exports to the United Kingdom, as almost half the increase in British imports were in finished manufactures and consumer goods, not areas of primary strength for U.S. exports.

The net result in the decline of U.S. exports to the United Kingdom and a 5.6 percent increase in British exports to the United States was that in 1971 the U.S. trade surplus with the United Kingdom, which averaged around half a billion dollars over the past several years, was reduced to about $44 million.

There are two factors which should contribute to a better market for American products in the United Kingdom in 1972. First will be improved competitiveness as a result of the December currency realignment. This will receive a further boost due to the more rapid rate of inflation in the United Kingdom compared with the United States.

Time for testing market

Those manufacturers whose products have been marginally overpriced in the British market should review their pricing and perhaps test this market in the light of these changed conditions. They should find themselves more competitive not only against British competition, but against that from major European countries, particularly Germany. Those whose products have normally found the British market a good outlet should consolidate their position to be able to take advantage of improvements in current slack areas as the economy picks up.

The second impetus to improved American sales to Britain should come from the government's efforts to expand the economy. With unemployment at one million, the highest figure since pre-war days, reflationary measures taken last July and the further stimulative measures announced in the new budget are a clear indication of the government's determination to improve the unemployment situation.

The major problem the Government faces in its economic expansion efforts is to maintain British competitiveness by controlling inflation. This calls for not only resisting excessive wage demands but improving unit costs of production by encouraging business investment in new plant and equipment. To the extent the Government is successful in this latter respect, U.S. machinery and production equipment manufacturers will benefit.

This is a most propitious time to reassess company strategy in relation to the United Kingdom. The effects of entry into the Common Market will be phased over a period of five years. By Jan. 1, 1976, only three years after entry, duties levelled by Common Market countries on British goods will have been cut by 80 percent, which will reduce them almost to duty-free status.

Additional adjustment

Conversely, current preferential tariff or free entry trading arrangements which the United Kingdom has with the other EFTA and Commonwealth countries will be adjusted upwards to the Common External Tariff on a phased basis in four steps, with exceptions in certain industrial materials of particular importance to British industry which will retain or be granted duty-free status.

Thus, for a limited period and possibly longer depending on ultimate trade agreements, to use the words of a British trade official, an American company trading from or through Britain will have special access to some 80 countries.

URBAN REDEVELOPMENT—*Construction may begin before year's end on this proposed San Salvador project for which implementing legislation was recently submitted. Twenty percent of the 1972 budget is devoted to public works.*

Optimistic Salvadorans Look Forward To Continued Economic Expansion

Salvadoran businessmen are optimistic about the future. In their comments to I. Paul de Pedraza, Commercial Attache at the U.S. Embassy in San Salvador, most reported steady improvement in their businesses in 1971 and look forward to continued increases in 1972. They feel that the new administration which takes over July 1 has a moral obligation to increase productivity and exports with a corresponding rise in imports.

Last year, as expected, was a satisfactory one for U.S. exports to El Salvador. Salvadoran imports ran strong throughout the year, particularly consumer goods, which accounted for most of the 16.7 percent overall increase.

Salvadoran trade with the Central American Common Market was the best yet, considering the fact that El Salvador and Honduras have still not composed their differences. El Salvador made some rather startling advances in its export transactions with Guatemala and Costa Rica. In spite of this excellent and profitable trade ($80.6 million in exports and $62.6 million in imports), the Government of El Salvador and private enterprise are rapidly becoming convinced that the country's orderly economic development depends a lot on its external trade, outside of the CACM area.

Of interest to the American businessman, whether in exports, joint ventures, franchise arrangements, agencies or distributorships, is the growing feeling among his Salvadoran counterparts that, in spite of intense competition in trade and financing from West Europe and Japan, U.S. products and services, expertise, training and management know-how are still the best. The Embassy has repeatedly been informed that the Salvadoran consumer would rather buy American. In most instances, where financing is not too different, the importer will make the effort to purchase American.

Within the past six months there has been evidence of this feeling in the fields of housing, fishing, hotel and motel management, electronics, telecommunications, television, hardware, gifts, light industrial equipment, textile machinery, pleasure craft, agricultural machinery, insecticides, fertilizers, and small home appliances.

El Salvador's traditional crops of cotton, sugar, corn, dry beans, and sorghum were good last year. Cotton and sugar prices were so good, in fact, that they helped offset the not-so-good results obtained by the coffee crop and the large inventories currently being financed by the Government. Efforts to diversify coffee have not met with much success.

Several businessmen have expressed the view that considering El Salvador's small size and growing population, agriculture should rapidly be de-emphasized in favor of industrial production; however, the Government is still stressing agriculture so that El Salvador can become completely self-sufficient in food crops. These same businessmen feel that El Salvador should take a page out of Taiwan's book, where conditions were not so long ago similar to those existing in El Salvador at the present time. The Salvadoran Foreign Minister has visited Taiwan recently.

In 1972 the Government plans to invest some 20 percent of its budget in public works—road maintenance, schools, hospitals, housing, communications, transportation. The U.S. Export Import Bank has liberalized its guarantee and credit risk facilities considerably, and provides exporters and importers its new comprehensive banking credit facility via local banks. The international lending institutions are loaning several million dollars to El Salvador for urban planning, irrigation projects, electrical installations, schools and roads. The United States is concentrating its project loans and technical assistance in the fields of education, urban planning, family planning and agriculture. Interested parties in urban planning should write to CONAPLAN, Casa Presidencial, San Salvador, El Salvador, and to Direccion General de Obras de Riego y Drenaje, 4 Calle Poniente #119, San Salvador, El Salvador.

In spite of Japanese competition —and the Japanese are into everything on an almost daily basis with clock-like precision and public relations ingenuity—the U.S. share of the market, taking Central American Common Market suppliers into consideration, remained at 28 percent. West Germany, Great Britain, France and Spain did well in 1971, particularly the Germans with their Volkswagen.

In auto, textile markets

The automobile market is, nevertheless, sliding towards the Japanese Toyota and Datsun, with their attractive advertisements in the news media, cinemas and along nearly every main street in the towns and villages. Japanese competition in textiles remains strong, with increasing Japanese investment in this and other manufacturing enterprises.

Japanese businessmen are still being praised, although less than in 1971, for their willingness to manufacture to price specifications and for being accommodating. On the other hand, local industry and the Government are finding out that Japanese investment is accompanied by many Japanese experts who tend to be quite demanding.

Salvadorans are still interested in exclusive distributorships, steady deliveries, competitive credit, fewer letters of credit, correspondence in Spanish as much as possible, and personal contacts. U.S. businessmen should have some knowledge of the country and its historical and economic background before coming to do business.

India Renews Call For Self-Reliance; High Returns Keep Investment Coming

This year may prove to be the benchmark of India's first generation of independence as it strives to attain the status of a developed country.

The combination of Prime Minister Indira Gandhi's electoral mandate, the continuing achievements of the "green revolution," and India's success in the Indo-Pakistan war has created a milieu of political stability and a new dynamism of self-confidence. Joseph L. Fisher, First Secretary at the U.S. Embassy in New Delhi, reports that the confluence of these events within the span of one year has revived India's often espoused goal of minimal development assistance and resulted in a resurgence of the call for self-reliance.

This is a herculean task for a country of 550 million people that received foreign assistance amounting to one billion dollars during the past year but managed an industrial growth rate of only 2.9 percent. For India to completely transcend the take-off stage of economic development and achieve a modicum of self-reliance within the foreseeable future, according to Fisher, the country will require continued substantial foreign financial assistance, progressive improvements in technical and managerial expertise, and possibly a pragmatic reordering of development priorities.

India's program of economic self-reliance need not necessarily have an adverse impact upon U.S. imports. The most negative factor in the reduction of U.S. exports to India was the partial suspension of the U.S. non-project assistance program during the December 1971 Indo-Pakistan war. During 1971 A.I.D.-financed exports amounted to $232.3 million. If, however, U.S. exports to India are financed only by India utilizing its own foreign exchange and that obtained from others in the World Bank group, it is apparent that there will be a sharp decline in U.S. exports to India. During the past four years non-A.I.D. financed U.S. exports to India have averaged only $200 million annually.

Among products imported from the United States that will be least affected by a continued suspension of non-project assistance are nonferrous metals, certain chemicals, high nutrient blended chemical fertilizers, machinery, transportation and telecommunications equipment.

In other cases, U.S. multi-national corporations may be able to compensate for loss of American-source exports by having their Canadian, West German, Japanese, French, or U.K. affiliates export their products to India. This deflection of trade might even be supported through bilateral economic assistance programs between these countries and India.

Greater procurement role

Agencies of the Government of India, particularly the State Trading Corporation (STC) and the Minerals and Metals Trading Corporation (MMTC), are assuming a greater role in procurement of India's imports. During fiscal 1970-71 Indian state trading agencies imported $1.5 billion of products and raw materials. Collectively, this represents 70 percent of India's total imports.

Moreover, the import policy for fiscal 1972-73 has pre-empted from the private sector an additional 56 products (including special iron and steel products, copper, nickel, ferro-alloys and basic chemicals) which will be imported by STC and MMTC. It is estimated that state trading in these products will increase the import volume of STC and MMTC by $100 million.

Simultaneously, the new policy

supplements the existing list of banned imports by prohibiting the importation of an additional 160 products and restricting imports of another 87 products. In the future it will become increasingly important for U.S. exporters to promote sales of their products to these state trading agencies if U.S. suppliers wish to obtain or maintain a share in the Indian market.

International tenders

Exports of selected U.S. products such as power transmission, telecommunication and railway equipment, irrigation pumps, copper and its alloys, tractors, capital machinery and plant equipment can be accomplished by more effective response on the part of U.S. firms to international tenders issued against IBRD-IDA credits granted to the Government of India. Of the approximate $600 million in IBRD-IDA credits received by India since 1964, U.S. exports accounted for only $92 million, or 15 percent of the total. Reportedly, India will receive about $320 million in development assistance from the World Bank during fiscal 1972, 1973 and 1974.

The concept of self-reliance as it applies to private foreign investment is basically an extension of India's policy to "Indianize" the ownership and management of selected industries. Now, even more than in the past, new joint venture propositions which involve a foreign equity investment of more than 40 percent will generally be unacceptable to the Government.

In addition, the Government recently announced an additional measure to Indianize existing private foreign investments. Henceforth, a company with more than 74 percent foreign equity seeking new equity capital for expansion must obtain 40 percent of this new equity capital from Indian citizens, thus effectively diluting foreign ownership. Similarly, a company with 61 to 74 percent, or 51 to 60 percent foreign equity will be required to Indianize its new equity capital by 33⅓ and 25 percent.

Foreign companies continue to invest in India despite government policies curtailing the extent of foreign ownership and past actions to nationalize Indian banks and general insurance companies. Forty-one foreign companies submitted equity proposals which were approved in 1971; of these, 15 represented investments by U.S. firms.

Apparently, the 14 percent earnings ratio realized by U.S. manufacturing firms in India has moderated the adverse effects of India's complex bureaucratic approval process and the restrictive policies affecting foreign ownership in India. By comparison, the earnings ratio of U.S. manufacturing firms in India is exceeded only by U.S. firms in Panama (31.6 percent), Japan (21), Germany (19.6), Switzerland (17.9), and New Zealand (15.2).

The Government has announced that it will be more liberal in approving investments by foreign firms that manufacture or assemble products for export. As an exception to the restrictive policy toward foreign ownership mentioned above, such export-oriented firms may be permitted to have a majority equity position—or 100 percent ownership — depending upon the proportion of output that is exported. Also, the Indian Government's import policy for fiscal 1972-73 is liberal towards the issuance of import licenses covering the importation of machinery and raw materials which will be used to make products for export.

Additionally, the government has announced that priority approval will be given to proposals by foreign firms wishing to enter into joint ventures for the manufacture of some 100 selected products.

Philippine Economy Back On Track; Role Of Foreign Investment Studied

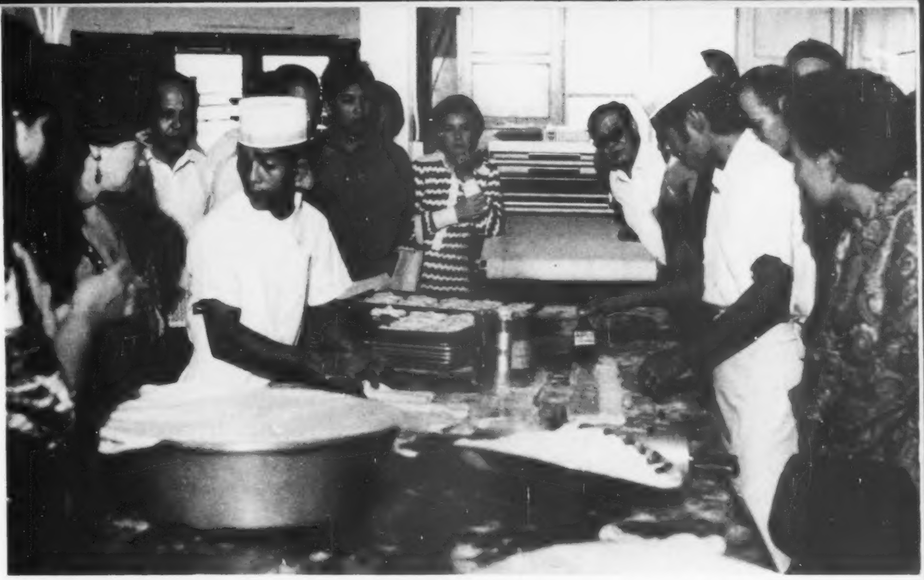
The Philippine economy is continuing its recovery from the post-devaluation doldrums of 1970. At the same time, proposals affecting foreign business and investment are being considered that heighten concern about ultranationalistic economic policies.

Outlook even brighter

The U.S. Embassy in Manila reports that the economy in 1972 is expected to exceed the real growth rate of 6.5 percent achieved in 1971, while external financial stability is maintained. Major domestic problems are inadequate rice production, inflation, and the need for expanded government revenue. The external financial situation, although greatly improved, will require careful management of the foreign debt and continued support from members of the Consultative Group (organizations and countries that provide financial assistance to the Philippines), scheduled to hold their next meeting in June.

Preliminary estimates show a continued balance of payments surplus amounting to $23 million for 1971, despite a worsening of the trade balance. Exports suffered reverses owing to declines in world market prices for many Philippine products, the U.S. dock strike and other largely external causes. Imports expanded by an estimated 9 percent, and the trend of higher import costs is expected to continue in 1972 when the full effect will be felt of the upward valuation of the yen and West European currencies with respect to the dollar and the peso.

Committees of the Constitutional Convention, which opened last June and is expected to produce a revision of the Constitution in



PHILIPPINE BAKERS—*Following a U.S. Food Processing and Packaging Equipment Show in Manila last September, a group of Philippine bakers toured Clark Air Force Base's bakery to see the latest in U.S. equipment in action. The tour was led by a prominent U.S. bakery equipment dealer and Robert H. Stein, Assistant Commercial Attache at the U.S. Embassy in Manila.*

coming months, and an interagency government group headed by Board of Investments (BOI) Chairman Paterno have been studying the role of foreign investment in the economy.

Vocal sentiment in the Convention has tended toward ultranationalism, favoring Filipinization of additional sectors of the economy. The government study group, with the help of IBRD consultants, is completing a comprehensive survey on the costs and benefits of foreign investment.

BOI Chairman Paterno has anticipated the outcome of the government study by recommending greater incentives to foreign investment in export industries and in pioneer and priority areas. He has proposed relaxation of rules, including limits on foreign equity share, governing investment in these areas. He has also recommended that existing as well as new investment be regulated by the BOI. The government's study and recommendations are being expedited in order to clarify the issues for the Constitutional Convention and to prepare for administrative or legislative action.

Meanwhile, the Convention debate has added to the uncertainty regarding political developments and economic policies—an uncertainty which has for many years been a negative factor in the Philippine investment climate. To a considerable degree, however, this has been offset by such positive factors as profitability, the indigenous private enterprise environment and favorable manpower—resources which continue to bring in new investment, currently entering the automotive, mineral, garment and other fields. Nevertheless, the full potential for new and mutually advantageous foreign investment is not being realized.

The United States in 1971 replaced Japan as the Philippines' primary trading partner but Japan greatly increased its lead as a supplier of imports ($359 million in 1971 compared to $291 million from the United States; the 1970 figures were $345 and $315 million, respectively). The U.S. dock strikes were undoubtedly responsible for some of the decline in imports from the U.S.; nevertheless, they continued the absolute downward trend of the past three years.

The prospects for U.S. exports to the Philippines have brightened by the improved price competitiveness of U.S. vis-a-vis Japanese and West European products after devaluation of the dollar, and as a result of expanded Eximbank financing. Equipment for mining and metal processing, textile machinery and equipment for public works and construction are all good prospects for 1972.

The prospect for restoration of import trade in several agricultural products and many categories of consumer items has been dimmed, however, by a sharp increase in Philippine tariff rates for so-called luxury categories.

While one of the reasons for the boost in tariffs was to permit lifting of the ban in effect on these items since February 1970, the government has thus far not decided to do so. Gradual and selective lifting of the import ban is expected after further study.

The Government has proposed new taxes to finance a significant increase in public investment, notably in roads, electric power, irrigation and schools.

Plans are under way for a new airport terminal complex to replace the Manila international terminal recently destroyed by fire. Several U.S. firms are interested in a package concept for building and operating the terminal which, including an air traffic control center, could cost $20 to $30 million.

Agreement expires in 1974

The Constitutional Convention has focused new attention on the problems raised by the approaching end of parity or national treatment for Americans and American-controlled firms in the Philippines. The Laurel-Langley Agreement will expire on July 3, 1974, and both governments have stated that they do not intend to seek its extension. The United States reiterated this stand in a recent communication to the Convention. Indications are that specific provisions on so-called parity rights may well be included in the new draft constitution along with provisions about foreign investment.

The most controversial issue and the one likely to cause the greatest problems in adjusting to the end of parity is the treatment of existing rights including land holdings, mineral and logging concessions, and other spheres of economic activity limited by the present constitution to Filipinos or companies at least 60 percent Filipino-owned.

The American position has been that land ownership is a vested right which is not affected by termination of Laurel-Langley. However, the Philippine position has been that parity rights have not become vested and that Americans will not be able to own land in the Philippines after July 3, 1974. Litigation in the Philippine courts may play a key part in resolving the land issue.

The status of mineral and logging concessions, leases and other contractual rights has not been as clearly defined. The American Chamber of Commerce of the Philippines has taken the position that they should be allowed to run their course until their expiration date.

On the general question of existing rights the United States has reiterated the need for an adequate framework after 1974 for a fair and equitable treatment of new and existing investments, and has expressed its intention to rely on the Philippine Constitution and laws, and on the sense of justice and fairness of Philippine courts, leaders and people to protect the rights of American investors.

A purely economic argument has been made by Americans and many Filipinos that in a capital-short country, it would be shortsighted to use local capital to take over existing American investments rather than direct it toward urgently needed new investment.

Although there have been reports of measures under study by the Philippine Government to ease the transition to the post-1974 environment for U.S. firms, no definite action has been announced.

Argentine Economic Slump Persists, But Imports Will Continue To Grow

Argentina's economy has not yet begun to recover from last year's slump.

What business wants and needs most, according to John E. Williams, Commercial Attache at the U.S. Embassy in Buenos Aires, is stability of economic policies. This stability has been lacking in Argentina for the past two years, with several changes of government. Moreover, the elections scheduled for March 1973 are casting a shadow of uncertainty over the business community. Little new foreign investment is coming in.

However, imports are booming, and will probably continue at a high level unless the Government severely modifies import and exchange rules, seeking rapid correction in the balance of payments. Even if this should happen, public sector demand, plus needs for essential imports in the private sector, would tend to keep imports from falling too much.

The Government budget is about 30 percent of the gross domestic product. A number of large public works, infrastructure, and state-owned industry projects are planned or under way. These will require large amounts of imported capital goods, intermediate goods, and, in some cases, raw materials. Thus, there will continue to be opportunities for U.S. exporters.

Most American businessmen in Argentina feel that the present economic difficulties are transitory. They hope that after the elections, with many uncertainties removed, business confidence will be restored and the Argentine economy will once again begin to increase its rate of expansion.

In the meantime, however, Argentina faces serious economic difficulties. The balance of payments deficit for 1971 was $562 million dollars, including a trade deficit of $180 million dollars.

The cost of living index has increased by over 47 percent in the last 12 months. The increase in GDP in 1971 reached 3.8 percent on the strength of a 10 percent jump in industrial output during the last quarter.

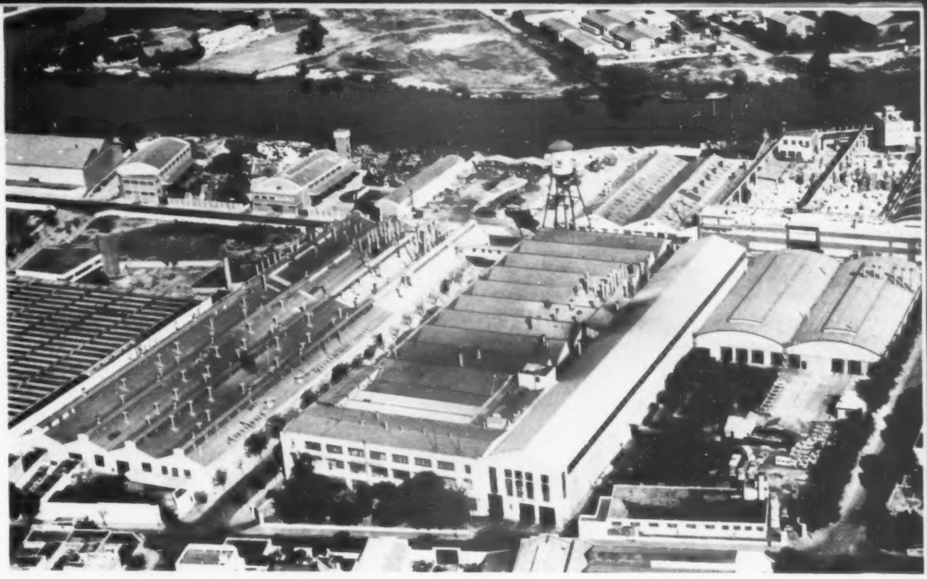
Despite these difficulties, imports have increased considerably. Total imports for 1971 were $1,890 million dollars, an increase of 12.2 percent over 1970. The trend appears to be continuing.

The U.S. share of the market, however, has declined somewhat. For the first 10 months of 1971 the U.S. market share was 23 percent, compared to 25 percent in the same period of 1970.

A drought in Argentina's grain-growing area has considerably reduced previous estimates for wheat and corn exports precisely at a time when increased exports of these crops are needed to strengthen the balance of payments. Nevertheless, the basic productive structure, both agricultural and industrial, is sound, and positive policies could bring forth large increases in production.

American exporters will continue to face problems in the Argentine market. First, there are still high tariffs and other trade barriers on many products, especially on those which are manufactured in Argentina. These have practically eliminated "luxury" imports. Second, the "Buy Argentine" law requires Government agencies and enterprises to procure in Argentina anything they need which can be manufactured there. Exceptions are made in urgent cases, or where there are large differences in price, quality, service, etc. However, obtaining exceptions can be onerous.

Another problem is that much of the increase in imports over the past year has probably gone into stockpiles to hedge against further



GENERAL MOTORS IN ARGENTINA—*GM Argentina's Barracas assembly plant, built in 1927, is still going strong. U.S. businessmen in Argentina are hoping that the country's economic situation will improve following March 1973 elections.*

inflation. At some point, manufacturers will be forced by credit or import restrictions to begin living off their stockpiles and reducing their new imports. This also applies to domestic industry since many businesses have been stockpiling domestically-produced goods for the same reason. A reduction in domestic purchases caused by drawing down stockpiles could put serious downward pressure on the level of industrial production, and thus the economy as a whole.

The U.S. Eximbank has offered the Argentine Central Bank export credits and guarantees amounting to $100 million dollars. If the Central Bank accepts this credit, U.S. sales should improve.

Another major consideration for U.S. exporters is steadily increasing competitive pressure from other industrial countries. An important aspect of this pressure is extremely close cooperation between foreign governments and their domestic industries, especially on large projects. This competition is not limited to the traditional major countries. Canada has been making a strong effort at market penetration with considerable success, and Australia is beginning to compete in some lines.

Good prospects seen

Nevertheless, American manufacturers who are prepared to meet the competition will find good sales opportunities in Argentina. Argentine plans for industrial development over the next few years include heavy expenditures in the fields of hydroelectric power, nuclear power generation, petrochemicals, shipbuilding, port development, airport equipment, steel-making machinery and equipment, and railway equipment.

Good opportunities continue to exist also in refrigeration and air conditioning equipment (especially for commercial road vehicles), heavy earthmoving equipment, hospital equipment, cold storage equipment, and police and security equipment.

Projects in some of the above fields are being financed by the IDB and the IBRD. For instance, the IBRD is financing a railway improvement program spread over several years. The IDB is financing several large power projects, a roadbuilding program, and possibly an iron ore pelletization plant.

There are two major areas of pressure by the Argentine Government which affect U.S. exports. One is the insistence by the Government that foreign companies manufacturing in Argentina, or having turn-key contracts, include as large a percentage as possible of Argentine-made components. This is often a decisive factor in bid awards.

The second problem area is in the overall U.S.-Argentine trade balance. In 1970, the United States sold Argentina $263 million more than it bought. For the first 10 months of 1971, the imbalance was $236 million. Argentine Government officials have consistently taken the position that this U.S. surplus is disadvantageous to Argentina, and have insisted that the U.S. Government take measures to improve the balance. On some occasions this factor may have affected Government procurement decisions.

One Argentine policy which has remained constant through changing governments is that of creating "centers of growth" in the interior of the country by inducing new industries to locate there. Another constant policy is "national integration." This translates into creating or improving communications and transportation infrastructure—as a means of tying together the many regions. These policies will continue to generate imports.

American firms wanting to increase their sales to Argentina should study the market carefully, make sure they have active, resourceful agents, and take maximum advantage of Eximbank financing. They should also emphasize the lower prices of U.S. products relative to products from Europe and Japan.

The Department of Commerce just opened a Regional Trade Development Center in Buenos Aires to help promote trade between the United States and Argentina, Uruguay and Paraguay. This will add considerably to the U.S. Government's capability to help U.S. firms increase exports to this region.

World Trade Actions

Japanese Tariff Preferences Go To 28 Developing Lands

Japan: Effective April 1, the Japanese Government added ten countries and 18 dependent territories (including Hong Kong) to the list of beneficiaries under its generalized tariff preference scheme for developing countries.

By a Cabinet decision of March 31, the following countries became beneficiaries of Japan's preference scheme: Bahrain, Botswana, Bulgaria, Jamaica, Portugal, Qatar, Romania, Swaziland, Tonga, and the United Arab Emirates.

At the request of the metropolitan countries, the following dependent territories were also made beneficiaries: Bahamas, Bermuda, British Honduras, the British Solomon Islands, the Cayman Islands, Falkland Island and dependencies, the Gilbert and Ellice Islands, Hong Kong, the Seychelles, Brunei, Grenada, St. Lucia, Papua-New Guinea, the Netherlands Antilles, Surinam, the Cook Islands, the Tokelau Islands, and Niue.

A special exceptions list including (but not limited to) textile goods, leather goods, and toys will apply to Hong Kong.

Greece: Importation of all preparations containing the insecticides aldrin, dieldrin, heptachlor, chlordane, isodrin and endrin has been banned. The March 13 decision also prohibits the use of these insecticide preparations, including DDT, in any form in agricultural applications. All quantities of these preparations currently in the hands of individuals or on the market have been impounded and will be bought up by the government at specified prices. The supervisory authority for buying out the available stock is vested with the Agricultural Bank of Greece.

The decision further delegates the authority for supplying Government services and agencies with needed quantities of the above preparations to the Undersecretary of Agriculture in the Ministry of National Economy. In each case a ministerial decision will be issued specifying the quantities of insecticides to be made available and their sales price. The recipient will be held responsible for ensuring proper use of any quantities of the preparations delivered to them.

Nigeria: Post-war recovery has progressed sufficiently to permit expansion of Government development outlays, reduced import duties, and modified exchange controls. In addition, the backlog of payments for imports which arrived prior to April 1, 1971 has been liquidated. The Government plans to establish a number of joint ventures with foreign partners this year, including a petrochemical complex, salt refineries, fertilizer plants, a second oil refinery, and two auto assembly operations.

Budget changes, introduced to encourage local industries, include reducing the import duties on raw materials to between five and ten percent, a uniform tariff of 57¢ per square yard or 66⅔ percent on textile imports which compete with domestic industries, and lowering a number of excise taxes on locally-produced items. The 65 percent 'super tax' on company profits has been replaced by a 45 percent rate for firms earning more than $15,200 and 40 percent for firms in the $9,120-$15,200 category. A capital gains tax of 20 percent will be introduced, and new incentives to spread industries throughout the country are being prepared.

Import duties have been lowered on some motor vehicles and sports equipment. The paperwork associated with the Approved User Scheme of concessionary rates for industrial imports has been streamlined. On the other hand, imports of bicycle tires and tubes, duplicating papers and corn are now restricted. Foreign exchange controls will be retained, but improved earnings will permit some relaxation. The mandatory 90-day and 180-day delays on payments for imports will continue, but several items such as building materials and buses and spare parts have been upgraded to the 90-day category. Books, construction machinery for local contractors, essential spare parts and official imports will be payable at sight. Repatriation of profits and dividends, previously limited to 40 percent, will be authorized in full through Dec. 31, 1970. Home remittances by foreign nationals are raised to 50 percent of gross salary, with an upper limit of $13,680.

Information on specific import duty rates may be obtained from the Trade Regulations Section, Africa Division, BIC-884, U.S. Department of Commerce, Washington, D.C. 20230, (202-967-2436).

Public Views Are Sought On Product Standards Pact

A full airing of public views on issues involved in U.S. consideration of an international product standards agreement is the aim of hearings to begin in Washington June 26. Sponsor is the President's Office of Special Representative for Trade Negotiations.

Persons desiring to appear should notify: Chairman, Trade Information Committee, Office of the Special Representative for Trade Negotiations, 1800 G St., N.W., Room 725, Washington, D.C. 20506. Application deadline is June 13, and the deadline for submission of briefs is June 19.

International Business Reports

Non-Tariff Trade Barriers as a Problem in International Development. By Caroline Pestieau and Jacques Henry. Sponsored by the Canadian Economic Policy Committee of the Private Planning Association of Canada. 220pp. $3.

According to the authors, the developing countries' most promising manufactured exports face non-tariff barriers in the advanced countries that are more numerous and burdensome than those facing goods traded within the group of advanced countries, because these manufactured exports cause, or threaten to cause, disruption and consequent unemployment in the importing markets.

Both authors of this two-part study offer suggestions as to how the widening conflict of interests between developing and already industrialized countries might be lessened, insisting particularly on the necessity of a multinational, rather than bilateral, approach. Pestieau sees an enlarged role for the GATT or UNCTAD and for international corporations, while Henry offers an alternative to voluntary export restraints which would work through the price system in the importing country.

Write: Private Planning Association of Canada, 2060 Sun Life Bldg., Montreal 110, Quebec, Canada.

American Investments in Spain. Published by the American Chamber of Commerce in Spain. 196pp. $9.

The aim in publishing this book, according to the Chamber, is to present a full and balanced picture of what American investment implies for the Spanish economy; the findings provide a basis for specific action recommendations. The book, reports the Chamber, also provides a breakthrough in the methods of studying any multinational company-host country relationship. The book contains a Stanford Research Institute report on The Role of American Investments in Spain's Development, as well as a study of the image of U.S. investment in Spain.

Write: American Chamber of Commerce in Spain, Ramblas, 109, Barcelona-2, Spain.

The Multinational Enterprise. Edited by John H. Dunning. 368pp. $13.50.

This book is concerned with the role of the multinational enterprise in the transfer of materials and goods across national boundaries, and with its impact on the welfare of nations at all economic levels. Originating from a conference of leading economists held at the University of Reading, the papers included focus on the repercussions of the growth of multinational enterprises in the world economy rather than on internal operations within individual firms.

Write: Praeger Publishers, 111 Fourth Ave., New York, N.Y. 10003.

The Financial Post's Survey of Mines 1972. Published by MacLean-Hunter Ltd. Toronto. 364 pp. $9.

The 46th annual edition of this publication includes company reviews, exploration and development activities, principal metallic ore milling plants in Canada, statistical tables of Canadian mineral production, maps of Canadian mineral areas, share price ranges, and a list of more than 4,000 predecessor and defunct companies.

Write: MacLean-Hunter Ltd., 481 University Ave., Toronto 101, Canada.

Nordisk Handelskalender (The Key to Scandinavia). $19.

Contains more than 110,000 addresses of firms in Denmark (including the Faroe Islands), Norway, Sweden, Finland and Iceland. All headings are in English and German in addition to the local language.

Write: Nordisk Handelskalender, 15 Egegaardsvej, DK-2610 Rodovre, Denmark.

Calendar For World Traders

June 2—Des Moines—World Trade luncheon meeting, Hotel Fort Des Moines, noon. Speaker: Sen. Jack Miller. Sponsors: Iowa REEC, World Trade Clubs of Iowa, Field Office.

June 6—Chicago—Automotive Exporters Club, Builders Bldg.

June 6—New York—FCIB luncheon and conference on international credit and exchange problems, Summit Hotel, noon.

June 8—Chicago — International Trade Club luncheon, LaSalle Hotel.

June 8-9—Mobile—International Business Forum at the International Trade Center. Sponsors: U. of Alabama's Graduate School of Business and Birmingham Field Office.

June 13—Chicago—Export Awareness seminar, Field Office.

June 14—New York—FCIB Publishers Export Credit Group dinner meeting, Advertising Club, 4 p.m.

June 14—White Plains, N.Y.—DISC Conference, White Plains Hotel, 11:30 a.m. Sponsor: Westchester County Assn.

June 20—New York—FCIB Hardware-Automotive & Allied Trade Group luncheon meeting, Advertising Club, 12:30 p.m.

June 21—Chicago—Chicago Midwest Credit Management Assn. meeting, Bismarck Hotel.

June 22—New York—FCIB Drug, Chemical & Food Export Club luncheon meeting, Advertising Club, 12:15 p.m.

Worldwide Business Services

The specific business opportunities on these and following pages have been developed for U.S. traders by international specialists in the Department of Commerce and Foreign Service Officers in U.S. Embassies and Consulates around the world.

Licensing and investment proposals from foreign firms are listed in the columns below. Specific product interests in each proposal are highlighted in bold type to facilitate identification and each proposal is preceded by the appropriate four-digit product number taken from the Standard Industrial Classification (SIC) Manual.

Background information on opportunities abroad and assistance on overseas investments are available from the Office of International Investment, BIC-878, U.S. Department of Commerce, Washington, D.C. 20230. "P" numbers should be used when responding to specific proposals.

WTD indicates that a World Trade Directory Report containing financial and background information on the foreign firm is available for $2 from the Department of Commerce, BIC-976, Washington, D.C. 20230, or from any Commerce Field Office.

Licensing, Investment Abroad

AFGHANISTAN—Firms contemplating investment in Afghanistan will be interested in the 28-page booklet published by the Ministry of Commerce. Titled *Private Investment in Afghanistan*, the illustrated booklet discusses the investment climate, the key investment law, the role of the special committee which administers the law, and the results of Afghanistan's private industrial investment program up to February of this year. A copy of the booklet can be obtained without charge from the American Embassy, Wazir Abkar Khan Mina, Kabul, Afghanistan.

AUSTRALIA—The New South Wales Centre recently moved its offices to Suite 6259, Five World Trade Center, New York, N.Y. 10048 (212-432-0155). Established by the State of New South Wales, the Centre assists U.S. companies considering investment and licensing in Australia. Write: David L. Dyer, Director, at the above address.

UNITED KINGDOM — 3533 — Scottish firm wants license to manufacture **oil-field equipment** such as submersible and mud pumps, compressors, gas turbine units, water injection equipment, filtration apparatus, other products. Will also consider joint venture. Significant experience in hydraulics pneumatics and electronics. Designs and builds naval vessels, industrial and marine boilers. K. Palfrey, General Manager, Engineering Dept., Yarrow Engineers (Glasgow) Ltd., Scotstoun, Glasgow, W.4., Scotland. WTD. P-72213

UNITED KINGDOM—3531—Manufacturing rights for **diesel and battery operated towing tractors and construction machinery for the building industry.** Products of interest include mortar mixers, tractor mounted bulldozers, loaders, small rollers, drilling equipment and spreaders. Firm produces fork lift trucks and is engineering sub-contractor. E. Trembath, Man. Dir., Mechanical Handling Div., Bonser Engineering Ltd., Giltbrook, Nottingham NG16 2GX, England. WTD. P-72212

JAMAICA — 2431, 2500 — Manufacturer of all types of **wooden doors, kitchen cabinets, office and casual furniture** seeks licenses or sub-contracting agreements for new designs of above products. U.S. participants to supply training and technical assistance to local personnel. Financial and equity participation negotiable. Plans to sell products locally and in Latin America. Miss Violet Taylor, Managing Director, Arawak Woodworking Establishment Ltd., 83-85 First St., Newport West, Kingston. WTD. P-72270.

UNITED KINGDOM — 3559, 3822 — Manufacturer seeks licenses to produce **cryogenics, high temperature and pollution control equipment.** Present products are pipe and butt weld fittings, ball valves, calibrated fans, aerospace components and precision presswork. P.W. Griffiths, Manager, Market Research & Product Devel., Wilmot Breeden (Truflo) Ltd., Westwood Rd., Wilton, Birmingham 6, England. WTD. P-72209

YUGOSLAVIA—3339—New technology for the production of **antimony dioxide** for use in the chemical and metal industries. Trajan Ivanovski, Gen. Dir., Stopanska Banka, Skopje. P-72198

SWITZERLAND—3079, 3559—Wants to represent U.S. firms seeking to license **processes and machinery for production of plastics and reinforced plastics in Europe.** Presently represents several American companies, has interests in both European and U.S. plastics industry. Robert Ernst, Pres., Rotas AG, Narzissenstrasse 5, 8033 Zurich. P-72250.

YUGOSLAVIA—3691—Technical know-how, engineering and equipment for the establishment of a factory for the production of **automobile batteries.** Trajan Ivanovski, Gen. Dir., Stopanska Banka, Skopje. P-72197

YUGOSLAVIA—7011—Established bank in collaboration with a large tourism organization seeks joint venture with U.S. hotel chains and tourist agencies for **construction of hotels and resorts.** Foreign capital also needed. Company now operates Albatros Hotel at Ulcinj and is currently building a large luxury hotel in Skopje. Kosta Dimov, Dep. Gen. Mgr., Commercial-Investment Bank (KOMERCIALNO-INVESTICIONA BANKA), P.O. Box 563, Skopje. P-72199

ARGENTINA—3714—Automotive radiator producer seeks licenses to manufacture **aluminum radiators.** Will send technician to licensor's plant for training. Simon Cahan, S.A.I.C., Holmberg 1936, Buenos Aires. WTD. P-72235.

INDIA—3679—Licenses and technical know-how sought by large conglomerate with diverse industrial interests to manufacture **dry reed switches and relays.** Licensor offered down payment for know-how and royalty over five years, but must insure 83% exports. J. K. Industries Ltd. (J.K.I.), Development Dept., 4 Bahadur Shah Zafar Marg, New Delhi 1. Attn: L. K. Malhotra, Project Manager. WTD. P-72234.

LEBANON—2510 — Custom furniture manufacturer seeks assistance for **multipurpose furniture plant.** Interested **versatile machinery** for short (200 pieces) and longer runs. Also interested mattress manufacture and supplies of fabrics, foam rubber and formica. Can finance, design, construct and furnish building on turn-key basis for $2 million sales. Office of International Investment, BIC-878, U.S. Department of Commerce, Washington, D.C. 20230. WTD. P-72233.

ARGENTINA—3841—Licenses sought to manufacture **implantable heart pacemakers** by producer of scientific instruments. Zeta Tecnica Cientifica S.A., Jose E. Uriburu 754, Piso 1, Buenos Aires. WTD. P-72231.

SWITZERLAND—3079 — Licenses to manufacture **novelty plastic articles,** packages and parts made by extrusion or injection molding. Also interested in plastic decorating and printing processes. Firm presently makes thermoplastic products for household, commercial and industrial use. Operates modern facilities. Write firm's director, Hans Frei, Plaston AG, 9443 Widnau, Switzerland. WTD. P-72237.

CEYLON—2911—Operator of Ceylon's only petroleum refinery proposes joint venture to construct a **100.000 barrel a day export oriented second refinery at Trincomalee.** U.S. participant to provide full foreign exchange for project and receive equity of up to 49 percent. Ceylonese firm also willing to explore crude oil purchase agreement. Write: Ceylon Petroleum Corp., P.O. Box 634, Colombo 3. P-72273.

ITALY—3569—Major producer of construction, mining and cement plant machinery seeks license to manufacture **dust collecting, air pollution control equipment,** particularly "wet process gas" processing equipment for use in asphalt plants. Must be able to process 60,000 cubic meters per hour. Input will be gas of following characteristics: combustion products from 1000 liters thick diesel oil with one percent sulphur content; 7000 ilograms condensation; 500 kgms limestone dust (99.4 percent granules below 37 microns and 10 percent below 5 microns). Required output: Air. Concentrated dust discharge must be lower than 150 milligrams per cubic meter. Interested firms asked to specify clean water consumption and recycle specification, if any, plus pressure drop of dust control plant when corresponding. Write: Loro and Parisini, 129 Via Savona, 20144 Milan. Attn.: Ing. Giancarlo Piazza. Please send copy of letter to Piazza to American Consulate General, Plazza della Republica, 32 Milan, Italy. WTD. P-72260.

NETHERLANDS—3272—Subsidiary of large building conglomerate seeks license and technical know-how for **labor-saving building methods, materials and systems.** Products of particular interest are "wet units" for homes using synthetic resin-based materials for cladding bathrooms, kitchens and building exteriors (Not plastic components such as bathtubs and showers). Also of interest are rib-floor concrete systems such as through-slab and waffle slab forming systems. Presently prominent industrial building contractor; employs 250, annual sales $6 million. Th. J. deGier, Man. Dir. N. V. Matab/Smit, Ringdijk 400, Slikkerveer, Netherlands. WTD. P-72265.

ARGENTINA—3494—Manufacturer and distributor of **forged steel valves, flanges and pipe fittings for industrial applications** seeks licenses for similar products. Valvulas LVM S.A.C.I., R.O. del Uruguay 125, San Justo, Provincia de Buenos Aires. WTD. P-72255.

ARGENTINA — 3551 — Manufacturing rights for **packaging machinery utilized in filling plastic bags with liquid or solid food products.** Firm produces milk and juice processing equipment. Ing. Edgardo J. R. Hernandez, Meitar Aparatos, Aristobulo Del Valle 7090, Santa Fe, Province of Santa Fe. WTD. P-72251.

AUSTRIA—2899—Manufacturing rights for **water treatment chemicals.** Market domestically and in neighboring European countries. Has acquired production facility, services of chemical engineer. Presently distributes wood pulp, laboratory chemicals, flocking agents. Walter Kneidinger, Chemisch Technische Produkte und Laboratoriums-praeparate, A-4121 Altefelden Doppl, Austria. WTD. P-72262.

FRANCE — 3443 — Producer of welded steel plate products seeks licenses to manufacture and sell in Europe **steel maritime shipping containers or similar boiler shop line products.** Jean Lentz, Sotralentz, 24 Rue Professeur–Froelich, 67 Drulingen, France. WTD. P-72276.

FRANCE—3714—License to manufacture **transmission components.** Specific interest in differentials and rear axles, both drive and drive-steer which can accommodate a load of 3 to 6 tons and adapt to motors of 50-70 h.p. Would also consider representing U.S. producer as agent or distributor. Presently, firm makes agricultural equipment. Jean-Michel Bouyer, Manager, Bouyer & Cie, 12-16 boulevard Jean–Jaures, 54–Tomblaine, France. WTD. P-72252.

GERMANY — 3423 — Manufacturer of **hand and edge tools for painters glaziers,** masons and floor covering firms seeks licenses for American products in same line. Korbach-Werkzeug Co., 60 Johannes Flintrop Str., 402 Mettmann, Germany. WTD. P-72257.

INDIA—3545—Seeks U.S. collaboration in venture to manufacture **broaches and diamond dies.** Wants financial, technical assistance. Plans to produce 10,000 broaches and dies annually. Claims 40% of domestic demand presently met through imports. Firm currently produces commutators; has diversified interests. Devinder Singh Sahney, Sahney Kirkwood Commutators Private Ltd. (SKC), 27 Kirol, Near Vidyavihar Station, Bombay 86, India. WTD. P-72264.

UNITED KINGDOM—3559—Licenses to manufacture **pollution control equipment for the pulp and paper, food and beverage, petrochemical, non-ferrous metal and nuclear power generation industries.** Equipment for the control of polluted effluents is of particular interest. Firm is experienced in working with these industries; designs, fabricates and erects processing plants. Roger M. Currier, Man. Dir., Julin (U.K.) Ltd., 470 London Rd., Slough, Bucks, SL3 80Z, England. WTD. P-72217

SWITZERLAND—3955—U. S. licenses for **stencils, carbonless and copying machine paper** (excluding electrostatic). Manufacturer and supplier of carbon paper. Hans Gfeller, Product Manager, Carfa AG, 8805 Richterswil, Switzerland. WTD. P-72256.

YUGOSLAVIA — 2111 — U.S. collaboration sought for producing **cigarettes, particularly "extra longs."** Also interested in new U.S. artificial drying techniques and machinery. Dragan Gradiski, Director, Foreign Exchange Dept., Commercial-Investment Bank (KOMERCIALNO-INVESTICIONA BANKA), P.O. Box 563, Skopje. P-72188

Licensing In U.S.

For additional information on opportunities to manufacture foreign firm's products in the U.S., write Commerce's Office of International Investment, BIC-874, Bureau of International Commerce, Department of Commerce, Washington, D.C. 20230, (202-967-2248), referring to the appropriate file number.

AUSTRIA—An Austrian firm offers a manufacturing license for their new patented process for **manufacturing "fructose" from natural fruit** sugars. The firm claims that their new process substantially lowers the production costs of the fructose used as a sweetener by the food industry, particularly in dietetic foods and for medicinal purposes. The firm is interested in manufacturing U.S. proprietary or patented chemical preparations, pharmaceuticals, food additives, and related products under license in Austria. **File 2188**

FRANCE—A reputable French company offers to license for manufacturing in the U.S. an **overhead conveyor system** that incorporates some features of both single and double tracked equipment. **File 2189**

GERMANY—An old established tool maker wishes to make a licensing arrangement with an American firm to manufacture their product line in the U.S. The main products offered are **hand and edge tools for painters, paper hangers, glaziers, masons and layers of floor coverings.** The product lines, reportedly, are most complete. **File 2190**

GERMANY—A company manufacturing **rheological and rheo-engineering testing equipment** is interested in setting up with an American firm a company to make their equipment in the U.S. Their instruments are used for comprehensive investigations and automatic controlling of: the flow properties of fluids and plastics, service characteristics, and processing properties and processing procedures. **File 2191**

SWEDEN—A scientifically tested **substitute for sewer systems in the home and commercial plants** is offered for manufacturing under license in the U.S. Essentially the product is a dry toilet consisting of two units: a biological composter and chemical water purifier. The main advantages are much lower installation costs, the absence of pollution, the saving of water, and utilization of nutrients presently being wasted. Much interest in the product has been generated, especially in Sweden, Norway and Finland where the units are now being manufactured. The system is widely known by people and organizations in the pollution control field. **File 2192**

SWEDEN—**Park cleaning equipment** is offered for manufacturing under license to U.S. firms by a Swedish firm. The equipment is designed for use in public parks, sport grounds, cemeteries, golf courses, and similar areas. The claimed advantages are ease in handling, light movability, and low maintenance costs. The design allows the cleaning machine to be towed behind garden tractors, riding mowers or any other motive power. The machine sweeps and picks up leaves. stones, grass, twigs, tins, paper and other debris from hard surfaces and turf areas. **File 2193**

SWITZERLAND—An established company that specializes in production of snacks, soft drinks and related items seeks a U.S. licensee to make their new **apple vinegar** that is presently sold throughout Europe. The main ingredients are reported to be fermented apple cider, whey, special herbs and a small quantity of honey. **File 2194**

SWITZERLAND—An old, well-established food products manufacturer is seeking a U.S. licensee to **manufacture and distribute seasoned vinegar.** The salad seasoning vinegar includes blended spices, cress and other seasonings. Presently, the product is considered a household word in Switzerland and is sold with success in other European countries. **File 2195**

SWITZERLAND — A technically-advanced firm proposes a joint venture with a U.S. company to make **continuous casting machines and related equipment.** Included in the overall product lines are: frequency channel type furnaces, furnace control panel, single or multiple rod and tube withdrawal machines for multiple wire and strip casting, auxiliary equipment such as travelling saws or stationary cutting machines, cooling water distribution and controlling batteries, coilers for strip and wire as well as rolling and pendulum rolling mills for strip and wire. Reportedly several complete casting systems have been installed in a factory in Illinois. **File 2196**

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Foreign Trade Opportunities

These trade opportunities are based on reports received from the U.S. Foreign Service by the Business Opportunities Staff and other units of the Bureau of Domestic Commerce (BDC), U.S. Department of Commerce, Washington, D.C. 20230. The commodities in which foreign firms have interest are indicated by the five-digit numbers and commodity classifications which are from the Standard Industrial Classification (SIC) Manual and the Numerical List of Manufactured Products, 1967 Census of Manufacturers, used extensively by Government and industry.

U.S. firms should be aware that the listing in Commerce Today *of opportunities to trade in specific commodities and technical data does not necessarily imply approval of their export by the Department of Commerce pursuant to the Export Administration Act of 1969. Applicable export licensing regulations must be followed.*

Every effort is made to include only firms or individuals with good reputations. However, the Department cannot be responsible for any trade relations.

The mark (●) indicates that this trade opportunity is a request for bids by a foreign government agency. A (★) at the end means that additional information may be borrowed by U.S. firms from the individual division of BDC. To avoid delays, requests for loan material should specify the country, commodity and foreign government agency.

WTD indicates that a World Trade Directory Report containing financial and business background information on the foreign firm is available for $2 from the U.S. Department of Commerce, BIC-976, Washington, D.C. 20230.

Direct Sales

Specific foreign firms have expressed interest in direct purchases of the products below. See also the "Agencies" listing.

Field crop farms

01195—SURINAM—Natural seeds for direct human consumption as health food. Reform en Dieethuis Natura (importer, dist., retailer), Rust en Vredestraat 46, Paramaribo. WTD in prep.

Canning, preserving foods

20310—AUSTRIA—Canned and cured sea foods, including soup, ready for consumption, household and institutional sizes. Direct purchase & agency. Vereinigte Fettwarenindustrie Gesellschaft m.b.H. & Co. K.G. (mfr.), Vogelweider Strasse 71-73, A-4600 Wels. WTD in prep.

20321—AUSTRIA—Canned baby foods (except meat). Direct purchase & agency. Vereinigte Fettwarenindustrie Gesellschaft m.b.H. & Co. K.G. (mfr.), Vogelweider Strasse 71-73, A-4600 Wels. WTD in prep.

20324—AUSTRIA—Canned specialties not containing red meats; household and institutional sizes. Direct purchase & agency. Vereinigte Fettwarenindustrie Gesellschaft m.b.H. & Co. K.G. (mfr.), Vogelweider Strasse 71-73, A-4600 Wels. WTD in prep.

20331—AUSTRIA—Canned fruits, household and institutional sizes. Direct purchase & agency. Vereinigte Fettwarenindustrie Gesellschaft m.b.H. & Co. K.G. (mfr.), Vogelweider Strasse 71-73, A-4600 Wels. WTD in prep.

20331—SURINAM—Canned fruit prepared for diabetics, natural and health food clientele. Reform en Dieethuis Natura (importer, dist., retailer), Rust en Vredestraat 46, Paramaribo. WTD in prep.

20332—AUSTRIA—Canned asparagus, mixed vegetables, pimientos, broccoli; household and institutional sizes. Direct purchase & agency. Vereinigte Fettwarenindustrie Gesellschaft m.b.H. & Co. K.G. (mfr.), Vogelweider Strasse 71-73, A-4600 Wels. WTD in prep.

20332—SURINAM—Canned vegetables prepared for diabetics, natural and health food clientele. Reform en Dieethuis Natura (importer, dist., retailer), Rust en Vredestraat 46, Paramaribo. WTD in prep.

20333—AUSTRIA—Canned mushrooms; household and institutional sizes. Direct purchase & agency. Vereinigte Fettwarenindustrie Gesellschaft m.b.H. & Co. K. G. (mfr.), Vogelweider Strasse 71-73, A-4600 Wels. WTD in prep.

20334—AUSTRIA—Canned fruit juices, single strength or concentrated; nectars; household and institutional sizes. Direct purchase & agency. Vereinigte Fettwarenindustrie Gesellschaft m.b.H. & Co. K.G. (mfr.), Vogelweider Strasse 71-73, A-4600 Wels. WTD in prep.

20334—SURINAM—Canned fruit juices prepared for diabetics, natural and health food clientele. Reform en Dieethuis Natura (importer, dist., retailer), Rust en Vredestraat 46, Paramaribo. WTD in prep.

20335—AUSTRIA—Canned vegetables juices; household and institutional sizes. Direct purchase & agency. Vereinigte Fettwarenindustrie Gesellschaft m.b.H. & Co. K.G. (mfr.), Vogelweider Strasse 71-73, A-4600 Wels. WTD in prep.

20335—SURINAM—Vegetable juices prepared for diabetics, natural and health food clientele. Reform en Dieethuis Natura (importer, dist., retailer), Rust en Vredestraat 46, Paramaribo. WTD in prep.

20341—AUSTRIA—Dried and dehydrated fruits, vegetables; freeze dried products. Direct purchase & agency. Vereinigte Fettwarenindustrie Gesellschaft m.b.H. & Co. K.G. (mfr.), Vogelweider Strasse 71-73, A-4600 Wels. WTD in prep.

20341—FRANCE—California dried raisins (Cinderella). Direct purchase & agency. La Pulpe (importer, dist., mfr.), 4, Villa Deloder, 75–Paris 13e. WTD in prep.

20341—SURINAM—Dried fruit for sale to health and natural food clientele. Reform en Dieethuis Natura (importer, dist., retailer), Rust en Vredestraat 46, Paramaribo. WTD in prep.

20342—NORWAY—Soups, dehydrated, for use in coin-operated beverage vendors; in bulk for repackaging by purchaser. Scott N. Berg A/S. Attn: Mr. Scott N. Berg. Mgr. (importer, mfr.), Bygdøy Allé 60 C, Oslo 2. WTD in prep.

20352—AUSTRIA—Pickle products, including mixes, relishes, etc.; household and institutional sizes. Direct purchase & agency. Vereinigte Fettwarenindustrie Gesellschaft m.b.H. & Co. K.G. (mfr.), Vogelweider Strasse 71-73, A-4600 Wels. WTD in prep.

20353—AUSTRIA—Sauces for meat. Direct purchase & agency. Vereinigte Fettwarenindustrie Gesellschaft m.b.H. & Co. K.G. (mfr.), Vogelweider Strasse 71-73, A-4600 Wels. WTD in prep.

20354—AUSTRIA—Salad dressings, mayonnaise and sandwich spread; household and institutional sizes. Direct purchase & agency. Vereinigte Fettwarenindustrie Gesellschaft m.b.H. & Co. K.G. (mfr.), Vogelweider Strasse 71-73, A-4600 Wels. WTD in prep.

Grain mill products

20423—AUSTRIA—Canned dog, cat foods. Direct purchase & agency. Vereinigte Fettwarenindustrie Gesellschaft m.b.H. & Co. K.G. (mfr.), Vogelweider Strasse 71-73, A-4600 Wels. WTD in prep.

20460—KOREA—Corn oil, refined, for use in processing into margarine. Estimated monthly requirement—100 drums, net weight 180 kilograms per drum. F.o.b. & c&f Pusan & Inchon quotations requested. Tongrip Products, Ltd. (importer), C.P.O. Box 5559, Seoul. WTD in prep.

Confectionery

20716—SURINAM—Canned, packaged and bulk nuts suitable for sale to health, natural food clientele. Reform en Dieethuis Natura (importer, dist., retailer), Rust en Vredestraat 46, Paramaribo. WTD in prep.

20720—NORWAY—Chocolate (instant)

or use in coin-operated hot beverage endors; in bulk for repackaging by purchaser. Scott N. Berg A/S. Attn: Mr. Scott N. Berg, Mgr. (importer, mfr.), Bygdøy Allé 60 C, Oslo 2. WTD in prep.

Beverage industries

20870—NORWAY—Orange juice for use in coin-operated beverage vendors; in bulk for repackaging by purchaser. Scott N. Berg A/S. Attn: Mr. Scott N. Berg, Mgr. (importer, mfr.), Bygdøy Allé 60 C, Oslo 2. WTD in prep.

Food preparations

20932—SURINAM—Sunflower, safflower seed oil for human consumption, bulk or packaged. Reform en Dieethuis Natura (importer, dist., retailer), Rust en Vredestraat 46, Paramaribo. WTD in prep.

20952—NORWAY—Instant coffee for use in coin-operated hot beverage vendors; in bulk for repackaging by purchaser. Scott N. Berg A/S. Attn: Mr. Scott N. Berg, Mgr. (importer, mfr.), Bygdøy Allé 60 C, Oslo 2. WTD in prep.

20999—NORWAY—Tea for use in coin-operated hot beverage vendors; in bulk for repackaging by purchaser. Scott N. Berg A/S. Attn: Mr. Scott N. Berg, Mgr. (importer, mfr.), Bygdøy Allé 60 C, Oslo 2. WTD in prep.

Broad woven fabric mills, cotton

22111—NIGERIA—Polyester/cotton yarn 45/2 and 0/2 counts, approximately 1 million lbs. Enpee Industries Ltd. (importer, dist., mfr.), Dalamal House (5th Floor), 36 Balogun Sq., P.O. Box 906, Lagos. WTD 6/71.

Men's, boys' furnishings

23214—GERMANY—Men's and boys shirts, casual wear, western style. Direct purchase & agency. ITAK Akselrad & Co. (importer, dist.), 49 Jahnstr., 6000 Frankfurt/Main. WTD 4/72.

23271 — GERMANY — Denim and cord jeans, other men's and boys' trousers, including Western style. Direct purchase & agency. ITAK Akselrad & Co. (importer, dist.), 49 Jahnstr., 6000 Frankfurt/Main. WTD 4/72.

23292—GERMANY—Men's ski and snow pants, jackets, woven. Direct purchase & agency. ITAK Akselrad & Co. (importer, dist.), 49 Jahnstr., 6000 Frankfurt/Main. WTD 4/72.

Women's, misses', juniors' outerwear

23393—GERMANY—Women's ski and snow pants, jackets, woven. Direct purchase & agency. ITAK Akselrad & Co. (importer, dist.), 49 Jahnstr., 6000 Frankfurt/Main. WTD 4/72.

Miscellaneous apparel, accessories

23812—SWITZERLAND—Work gloves, personal industrial safety gloves. F. Freitag AG (importer, dist., mfr.), Ackerstrasse 44, 8031 Zurich. WTD in prep.

Fabricated textile products

23990 — NORWAY — Safety belts and seats, automobile, for children. Racoli A/S. Mr. Ola Lie, Mgr. (importer, dist., retailer), Erl. Skjalgssonsgate 19, Oslo 2. WTD in prep.

Millwork, veneer, plywood, prefabricated structural wood items

24318—ISRAEL—Doors, screens, shutters, etc., louvred, made of pine or other timber. Itron Olim Services Ltd. (importer, dist., retailer), 2 Shderot Rothschild, Tel Aviv. WTD in prep.

Industrial chemicals

28183 — CANADA — Rubber-processing chemicals, plasticizers for resale in bulk or for further processing. Canadian distribution rights desired. Leonard E. Parsloe, Purchasing Mgr., Mallinckrodt Chemical Works Ltd. (importer, dist., mfr.), 600 Delmar Ave., Pointe Claire 710, Quebec. WTD 4/72.

28192 — GERMANY — Inorganic industrial bleaching compounds. Direct purchase & agency. H. J. Schmidt K.G. (importer, dist.), 16–18 Willi Brueckner Str., Postf. 2168, 5450 Neuwied. WTD 4/72.

28195 — GERMANY — Aluminum oxide. Direct purchase & agency. H. J. Schmidt K.G. (importer, dist.), 16–18 Willi Brueckner Str., Postf. 2168, 5450 Neuwied. WTD 4/72.

28198 — KOREA — Chemical catalytic preparations—H-acid, an intermediate product for dyestuff industry; monthly requirement—10 m/t. Reportedly H-acid is an automatic approval item under current Semi-Annual Trade Plan. Willing to do business on L/C basis under long term contract for 120 tons or more. Pan Asian Trading Co., Ltd., Attn: Hong-Ku Chung (importer, dist., agent), C.P.O. Box 208, Seoul. WTD in prep.

28199—GERMANY—Inorganic chemical specialties. Direct purchase & agency. H. J. Schmidt K.G. (importer, dist.), 16–18 Willi Brueckner Str., Postf. 2168, 5450 Neuwied. WTD 4/72.

Synthetic materials

28210—AUSTRIA — Polyamide powder 420 DEN for whirl sintering and metal sintering. DLS-Chemie, Dr. Ing. Ludwig Schoen (importer, mfr., agent), Industriezentrum NOe-Sued, Strasse 3, A-2351 Wiener-Neudorf. WTD 6/71.

28214 — TAIWAN — Urea-formaldehyde resins. Tower Industrial Corp. (mfr.), 2nd Floor, 64 Nanyang St., Taipei 100. WTD in prep.

28241—TAIWAN—Nylon filament (66 20D & 40D) for panty hose. Pantex Corp. (mfr.), 110 Min Chuan West Rd., Taipei. WTD in prep.

Drugs

28331—CANADA — Bulk ingredient chemicals, such as enzymes, additives, preservatives, to be marketed to Canadian food industry. Distribution rights desired. Leonard E. Parsloe, Purchasing Mgr., Mallinckrodt Chemical Works Ltd. (importer, dist., mfr.), 600 Delmar Ave., Pointe Claire 710, Quebec. WTD 4/72.

28332—SURINAM—Natural drugs, medicinal botanicals. Reform en Dieethuis Natura (importer, dist., retailer), Rust en Vredestraat 46, Paramaribo. WTD in prep.

28340 — CANADA — Bulk ingredients, such as narcotics, alkaloids, aspirin, for resale to pharmaceutical manufacturers. Distribution rights in Canada desired. Leonard E. Parsloe, Purchasing Mgr., Mallinckrodt Chemical Works Ltd. (importer, dist., mfr.), 600 Delmar Ave., Pointe Claire 710, Quebec. WTD 4/72.

Cleaning preparations

28424—SWITZERLAND—Anti-seize, lubricating compound corresponding to Federal Specs MIL-A-907D. Technokontroll AG (importer, dist.), Ueberlandstr. 360, 8051 Zurich. WTD 7/71.

Paints, varnishes, lacquers, enamels

28510—CANADA—Specialty chemicals. Distribution rights for resale in bulk to Canadian paint industry. Leonard E. Parsloe, Purchasing Mgr., Mallinckrodt Chemical Works Ltd. (importer, dist., mfr.), 600 Delmar Ave., Pointe Claire 710, Quebec. WTD 4/72.

28516 — JAMAICA — Aluminium spray coatings for aircraft. Samples, brochures, price list requested; initial order 1000 gals. F & J Agency (importer, dist., agent), 2 A Grove Rd., Kingston 10. WTD 3/72.

Agricultural chemicals

28710—TURKEY—Compound fertilizers 18-46-0, 20-20-0 or 18-23-0; estimated annual requirement 100,000 tons gross. Ozbek Ozler (farmer, businessman), Kurtulus Mahallesi 292, 3, Adana. WTD in prep.

Footwear, except rubber

31412—SWITZERLAND — Personal industrial safety work shoes for men. F. Freitag AG (importer, dist., mfr.), Ackerstrasse 44, 8031 Zurich. WTD in prep.

Abrasive, asbestos, nonmetallic mineral products

● **32900—EGYPT**—2,000 items including various sizes and quantities of felt and rubber rings, rubber reinforced cups with springs and PVC packing rings. U.S. firms should send bids to M. El Batran, Helwan Military & Machine Tools Industries Co., Cairo, A.R.E. Ref. 420/14-42, letter to Department of Commerce of March 1972. Seven drawings and three sheets of specifications for review only available on short term loan basis to firms domiciled in U.S. from General Industries Division, BDC-772, U.S. Dept. of Commerce, Washington, D.C. 20230, ★(202-967-3155).

32950—AUSTRALIA—Activated clay for petroleum refining; approximately 120,000 kilos per yr. required, with expected increase of 30%. Western Oil & Refining Co. Pty. Ltd. (importer, retailer, Petroleum refiner), 24 Clayton St., Bellvue, W. Australia, 6056. WTD in prep.

Steel mill products

33120—PAKISTAN — Mild steel billets, sheets and plates, etc. Pak Elektron Ltd. (importer, mfr.), Ferozepur Rd., P.O. Box 524, Lahore. WTD 2/71.

33122—GERMANY—Steel billets (carbon and light alloy steel), square, according to German standards ST 37-2 and RST 37-2; 30,000 tons per yr. for forging and upsetting and 50,000 tons per yr. for rolling. Steel Partners Stahl- und Metallhandels GmbH. (importer, dist), 49 Freytagstr., 4 Duesseldorf. WTD in prep.

33123—GERMANY—Hot rolled plate, cut to length or in coils, according to German standards ST 37-2 and RST 37-2; 50,000 tons per yr. Steel Partners Stahl- und Metallhandels GmbH (importer, dist.), 49 Freytagstr., 4 Duesseldorf. WTD in prep.

33124—GERMANY—Wire rod (carbon steel) for making concrete reinforcing mesh; 70–80,000 tons per yr. Steel Partners Stahl- und Metallhandels GmbH (importer, dist.), 49 Freytagstr., 4 Duesseldorf. WTD in prep.

33127—GERMANY—Cold rolled sheets, cut or in coils of 1-3 mm width, according to German standards ST 12-03; 25,000 tons per yr. Steel Partners Stahl- und Metallhandels GmbH (importer, dist.), 49 Freytagstr., 4 Duesseldorf. WTD in prep.

33127 — SURINAM — Galvanized steel sheet in coils ± 2 tons coil weight; inner coil diameter 20 in.; sheet or coil width 35 in.; sheet thickness 0.63 millimeter 0.45 mm, 0.38 mm, 0.33 mm, 0.27 mm. Quantity desired over period of one yr. not less than 1,000 tons. Surinaamse Aluminium Fabriek "Everhard" (SAFE) (importer, dist., mfr.), P.O.B. 979, Paramaribo. WTD 4/72.

Rolling, drawing, extruding of nonferrous metals

● **33550—THAILAND**—Aluminum conductor, bare, code IRIS, 500,000 meters; Service drop cable, code STARRO, 12,000 meters; code SPICA, 50,000 meters; code GNEISS, 35,000 meters; code MARS, 3,000 meters; code DOLOMITE, 20,000 meters; code URANUS, 6,000 meters. Tender MEA-PSD-283, bid deadline June 20, Purchase and Stores Department, Metropolitan Electricity Authority, 121 Chakpet Rd., Bangkok 2. Specifications available on short term loan basis to firms domiciled in the U.S. from Metals and Minerals Division, BDC-782, U.S. Dept. of Commerce, Washington, D.C. 20230, ★(202-967-2181).

● **33500 — THAILAND** — Purchases & Stores Department, Metropolitan Electricity Authority, 121 Chakpet Rd., Bangkok 2, Thailand, invites tenders for Service wire, type A, B, C and Control Cable. Tender No. MEA-PSD-282. Bid deadline June 13.

33512 — PAKISTAN — Copper sheets, strips. Pak Elektron Ltd. (importer, mfr.), Ferozepur Rd., P.O. Box 524, Lahore. WTD 2/71.

33527—PAKISTAN—Aluminum ingots. Pak Elektron Ltd. (importer, mfr.), Ferozepur Rd., P.O. Box 524, Lahore. WTD 2/71.

33571—BOLIVIA — Wire, aluminum, bare, including ACSR. Requests replies in Spanish. Cablebol S.A. (importer, mfr.), Avenida America S.A., Casilla 394, Cochabamba. WTD 1/71.

33572—PAKISTAN—Copper wire. Pak Elektron Ltd. (importer, mfr.), Ferozepur Rd., P.O. Box 524, Lahore. WTD 2/71.

Fabricated metal products

34940—UNITED KINGDOM — Valves; safety shut off type for burner systems of slow opening rapid closing type. Caid Engineers Ltd., Attn: R. H. Campbell, Dir. (mfr.), 22 The Broadway, Maidstone, Kent. WTD in prep.

Engines, turbines

●**35100 — LIBYA** — Supply and install steam turbine power station consisting of three 40 Megawatt units; a desalination plant with capacity of 22,500 cubic meters a day; and port facilities for discharging fuel and storage tanks. Tender No. 16/11/72, bid deadline July 22, the Electricity Corporation, Bir Blal, P.O. Box 3047, Benghazi, Libya.

●**35100 — NEW ZEALAND** — City of Dunedin Electricity Department (P.O. Box 513, Dunedin, N.Z.) invited firms to register to tender for supply of four Francis water turbine driven alternator units complete with transformers, switchgear, control gear and associated equipment. Three units to be 18 MW, one to be 26 to 30 MW capacity. Tender deadline August 1. Letters requesting registration should cite "Waipori No. 2A Station Extension Stage 11-contract No. 790" and summarize firms qualifications.

Construction, mining, materials handling machinery, equipment

● **35300 — COLOMBIA** — Tire mounted loaders, mobile cranes, 65 and 100 h.p. crawler tractors, wheel rollers, draglines and motor-grader. Specifications may be purchased from: Direccion del Plan Maestro de Acueducto, Carrera 40 No. 22-B-60, aficina 302, Bogota, Colombia for 3,000 Colombian pesos (21.50 pesos= U.S.$1). Bid deadline July 3. World Bank Funds.

● **35300—ITALY**—Complete plant for pulverization of marble to a size of not more than five microns through flotation conveying system. CA. DE. Mar., Via Cevadini 12, Milan. WTD in prep.

35310 — PHILIPPINES — Machinery, heavy equipment for reclamation and general construction works. Outer Bay Developers Group, Inc., Attn: Miss Concepcion R. Javier, Pres. (importer), 1767 P. Guevarra St., Sta. Cruz, Manila. WTD in prep.

35314—AUSTRIA—Power cranes, draglines, shovels for use in construction industry. Direct purchase & agency. Wilhelm Malec (importer, agent), P.O. Box 420, A-4021 Linz/D. WTD 1/71.

35316—AUSTRIA—Mixers for concrete, mortar, plaster; pavers, bituminous distributors; concrete vibrators. Direct purchase & agency. Wilhelm Malec (importer, agent), P.O. Box 420, A-4021 Linz/D. WTD 1/71.

35318 — AUSTRIA — Scrapers, motor graders, compactors; construction machinery for mounting on tractors. Direct purchase & agency. Wilhelm Malec (importer, agent), P.O. Box 420, A-4021 Linz/D. WTD 1/71.

35319—AUSTRIA—Excavating and road construction machinery, including hydraulic dredging machinery, self-propelled ditchers and trenchers, earth augers, power post-hole diggers, etc. Direct purchase & agency. Wilhelm Malec (importer, agent), P.O. Box 420, A-4021 Linz/D. WTD 1/71.

35319 — GERMANY — Excavators, road construction machines. Direct purchase & agency. Carl Neudorf GmbH. (importer, dist., agent), 6201 Nordenstadt, Daimlerring 7. WTD 4/72.

35334—LIBYA—Drilling rigs; capacity from 2500 up to 3500 ft.; final diameter 9⅝"; drilling pipe 3½"; pump must be detached and on truck; air compressing system; caterpillar engine type or equal. Eng. M.A. Abdel-Rahman (importer, agent, consulting agency), Technical Office–For Agencies & General Consulting, 1 El Naser St., P.O. Box 4423, Tripoli. WTD in prep.

Metalworking machinery

35413—AUSTRALIA—Large cutters for Sunderland Gear Cutting Machine. Requirements vary from 5" C.P. to 2 D.P. and could amount to 15 sets of various sizes. Walkers Ltd. (mfr.), Attn: W. C. Flockton, P.O. Box 211, Maryborough Q. 4650. WTD in prep.

35442—GUATEMALA—Industrial molds for molding plastic toys: purchase or lease of molds for local manufacture by extrusion, injection or blowing of plastic toys. Desire technical know-how assistance. Muñecas Florido & Cía. Ltda. (dist., mfr.), 4a. Avenida 11-50, Zona 1, Guatemala City. WTD 5/72.

Special industry machinery

● **35500—TOGO**—Full plant to manufacture and cut polyurethane foam with capacity of about 120 tons annually, based on 8 hour day. Quotations should be c.i.f. Lome and should include: list and price of required equipment, list and price of spare parts required for two years, amount and price of raw materials required for three months, size of staff needed to run plant, daily water consumption, required floor space, and technical assistance available. Price quotations should be sent to Ministere De Commerce, Centre De Promotion Des Petites et Moyennes Entrepriese, Boite Postale 1086, Lome. Quotations in English acceptable, though French preferable.

35511—PHILIPPINES—Ice cream manufacturing machinery, equipment (complete set). Pan-Asiatic Commercial Co., Inc., Attn: Mr. Juanito K. Tan, Pres. (importer, dist., agent), Ortigas Ave. Ext., Rosario, Pasig, Rizal. WTD in prep.

35521—ISRAEL—Winding machine to wind yarn in spherical pattern as foundation for volley balls, basket balls, etc. Rubber Factory Franz Levi, Ltd. (importer, mfg., exporter), P.O. Box 787, Haifa. WTD in prep.

35591—INDIA—Equipment to manufacture 10,000 metric tons vinyl acetate monomer based on acetone and ethylene. Supplier required to provide technical know-how, operational assistance. Cellulose Products of India Ltd., Attn: J. K. Patel, Secretary (mfr.), P.O. Kathwada Maize Products, District Ahmedabad, Gujarat. WTD 12/71.

35595—BOLIVIA—Cotton ginning machinery, equipment. Complejo Industrial Godefroy "Comingo" (importer, mfr.), Camino Km. 5½, P.O. Box 1568, Santa Cruz. WTD in prep.

35595—ISRAEL—Machinery for manufacture of single dose sterile eye drops. Galma Ltd., Pharmaceutical Chemical Laboratories (importer, mfg., agent), 15 Lilienblum St., P.O. Box 187, Tel Aviv. WTD in prep.

General industrial machinery

● **35600 — ARGENTINA** — Semi-portable oil purifying unit, complete with accessories and operation control system, handling 2200 to 2500 liters of oil per hour; one portable oil purifying unit, complete, handling 1000 to 1200 liters of oil per hour. Tender No. 32652; bid deadline June 6. Compania Italo Argentina De Electricidad S.A., San Jose 180, Buenos Aires. Specifications available for 50 argentine pesos from above address. When received, specifications available on a short term loan basis to firms domiciled in the U.S. from General Industries Division, BDC-772, U.S. Dept. of Commerce, Washington, D.C. 20230.

35610 — PHILIPPINES — Slurry pumps

for mining industry. Shurdut Industrial Distributors, Inc., Attn: Stanley D. Phillips, Pres. & Gen. Mgr. (importer, dist., retailer), 2304 Pasong Tamo Extension, Makati, Rizal, P.O. Box 1499, Manila. WTD 5/71.

35690—AUSTRALIA—Continuous flow vacuum filters for use in petroleum refining designed to remove 250 kilos of spent clay per hr. with flow rate of 1,000 Imp. G.P.H. Western Oil & Refining Co. Pty. Ltd. (importer, retailer, petroleum refiner), 24 Clayton St., Bellvue, W. Australia, 6056. WTD in prep.

35690 — BOLIVIA — Complete oxygen plant. Complejo Industrial Godefroy "Comingo" (importer, mfr.), Camino Km. 5½, P.O. Box 1568, Santa Cruz. WTD in prep.

Service industry machines

● **35800—TAIWAN**—Full air conditioning systems for seven telephone office buildings. Load requirements range from 910,000 GTH BTU/HR cooling, 220,000 GTH BTU/HR heating with 3,250 CFM outside air to 7,904,000 GTH BTU/HR cooling load, 3,319,000 GTH BTU/HR heating load and 27,000 CFM outside air. Tender No. IB2C-610098; bid deadline June 30. Central Trust of China, Purchasing Dept., 49 Wuchang St., Sec. 1, Taipei. A copy of specifications is available for review only, not for loan, from General Industries Division, Room 2812, U.S. Department of Commerce, Washington, D.C. 20230, ★(202 967-5589).

Electric transmission, distribution

● **36100—TAIWAN**—Supply of 480 volt, 60 hz. motor control centers consisting of motor starters and air circuit breakers, and 120/250 volt lighting and power panels with manually operated circuit breakers. Tender No. and bid deadline not available. Bidding documents are available from Gibbs & Hill, Inc., 393 Seventh Ave., New York, N.Y. 10001.

Household appliances

36393 — JAPAN — Humidifiers for air conditioning, household; quantity—300/500 units. Kokusai Kogyo Co., Ltd., Attn: Mr. Isamu Kondo (importer, dist., agent), 9-4 Mita 3-chome, Minato-ku, Tokyo, or Takanawa, P.O. Box 8, Tokyo. WTD 2/71.

Communication equipment

36610—ARGENTINA — Graphic transceiver of documents, graphs, photographs, etc., utilizing telephone line transmission. Centro de Computación de Datos S.A. (computing programing service), Cangallo 315, Piso 1, Of. 104, Buenos Aires. WTD 10/71.

● **36620—IRAN**—State Railways require one (1) single-side-band high-frequency 150 watt transceiver. Tender no. 35/51, bid deadline July 12. Documents available on loan from Communications-Electronics Div. BDC-720, U.S. Department of Commerce, Washington, D.C. 20230 ★(202-967-4822).

Electrical machinery, equipment

36945—FRANCE—Turn signal switches for automobiles. Société D.A.V. (mfr.), Vetraz-Monthoux, 74-Annemasse. WTD in prep.

Motor vehicles, equipment

37141—FINLAND — Parts, accessories for trucks, buses, especially: rod end bearings and ball joints; thermostats; water pump repair kits; fan belts (also for cars); oil and air filters. Oy Lohjan Liikenne Ab/LL-Autotarvike, Attn: Mr. Seppo Aulilo (importer, dist., bus lines, regular route operator and owner of fleet), Karnaistenkatu 13, 08100 Lohja 10. WTD 4/72.

Surgical, medical, dental instruments

38410—GERMANY—Diagnostic instruments and apparatus; gynecological apparatus and instruments; cytological equipment. Ernst Richter (importer, dist.), 3 Auf den Haefen, 28 Bremen. WTD 5/72.

38410 — GERMANY — Shock simulating models; equipment for measurement of circulatory mechanics and lung-function, especially small computers; apparatus for blood gas analysis in vivo; medical mass spectrometers for measurements in gases and blood. Carl A. Hoyer (importer, dist.), 44 Parkallee, 28 Bremen. WTD 1/72.

38423—SWITZERLAND—Personal industrial safety devices: respiratory protection equipment, eye, face protecting devices, protective clothing, first aid kits, novelties, disposable items. F. Freitag AG (importer, dist., mfr.), Ackerstrasse 44, 8031 Zurich. WTD in prep.

Ophthalmic goods

38513 — SWITZERLAND — Industrial goggles, eye protectors, welding circles, plates, also disposable items. F. Freitag AG (importer, dist., mfr.), Ackerstrasse 44, 8031 Zurich. WTD in prep.

39550 — SWITZERLAND — Carbonless paper for copying purposes; special paper for copying machines. Direct purchase & agency. Carfa AG, Attn: Mr. H. Gfeller, Production Mgr. (importer, dist.), 8805 Richterswil. WTD in prep.

Manufacturing industries

● **39900 — VIETNAM** — Machinery and equipment for spray drying plant for synthetic detergent. Plant is planned to produce 750 Kgs. of dried hollow beads per hour. Tender No. 04/72/NKT/IDB; bid deadline June 17. Industrial Development Bank of Viet-Nam (IDB), 40 Nguyen Hue, P.O. Box 336, Saigon. Specifications available on a short term loan basis to firms domiciled in the U.S. from General Industries Division, BDC-772, U.S. Dept. of Commerce, Washington, D.C. 20230, ★(202-967-5593).

39999 — ISRAEL — Hair, synthetic, by weight packed in cardboard boxes of 40-50 kgs. each; preferably "Kanekalon" or "Ilura" brands, or equal. HAKOHAV—Wigs Manufacturers (dist., mfr., retailer), 4 Yehuda Halevy St., Bnei-Braq. WTD in prep.

Business services

● **73940 — BOLIVIA** — Municipality desires to effect its reorganization by the end of 1972. Correspondence strongly preferred in Spanish with Municipalid de La Paz, Oficina del Oficial Mayor, Calle Mercado esquina Colon, La Paz Bolivia. Value of tender estimated at $US 30,000. Bidding is being held open until bids are received from American consulting firms. Copy of the specifications available from Service Industries Division, BDC-736, U.S. Dept. of Commerce, Washington, D.C. ★(202-967-5678) and from the Dept. of Commerce Field Office, 11444 Federal Bldg., 450 Golden Gate Ave., San Francisco, Calif. 94102 ★(415-556-5868).

Services

● **89100—BOLIVIA** — Architecture ana design for a new La Paz Municipal Theater, including model. Bid deadline July 3, 5 p.m. Bidders must be members of the Bolivian College of Architects; non-Bolivians may seek registration in the College, or act in partnership with a Bolivian member. List of Bolivian architects available from Service Industries Division, BDC-736, U.S. Department of Commerce, Washington, D.C. (202-967-5678). Copy of the specifications (including maps) available on short-term loan basis from Service Industries Division or can be obtained from the Direccion de Arquitectura, Municipalidad de La Paz, La Paz, Bolivia, for $b. 50 (about $US 4). Municipality of La Paz expects theater to cost about $US 2 million. Designs will be judged—first prize $b. 50,000 (about $US 4,000); second place, $b. 30,000; third, $b. 20,000.

Cameroon Government To Build Railway Bridge At Japoma

The Government of Cameroon has announced a call for bids for the construction of a rail bridge at Japoma, 18 kilometers distant from the port city of Duala. Bidders are asked to submit proposals for two solutions: 1) a new 300-meter bridge together with its links to the rail line for a distance of 1,924 meters; and 2) replacement of 140 meters of the existing bridge with a prestressed concrete structure with a traffic interruption not to exceed 72 hours. The cost is expected to exceed $1.2 million. Bid deadline July 1.

Specifications for this tender (No. 1/G.T/1971/1972) may be purchased for a CFAF 70,000 fee (CFAF 253 equals $1) plus air mail postage of CFAF 2,050, from the Direction de la Regie des Chemins de Fer du Cameroun, Boite Postale No. 304, Douala, Republique Federale du Cameroun. Make check payable to Agent Compatable of the Regie. Correspondence is preferred in French. The U.S. Department of Commerce has reference copies of the specifications which may be viewed at the following locations: Room 2116, U.S. Department of Commerce, Washington, D.C., and 11444 Federal Bldg., 450 Golden Gate Ave., San Francisco, Calif.

Israeli Telephone Exchanges Asks Storage Battery Data

Israel's Ministry of Communications has requested sales data from U.S. suppliers of storage batteries for telephone exchanges. Presently the type storage batteries used are lead acid, 50 volt, 3000-5000 amphere/hour at normal discharge time of 5 hrs. Maximum current 3,000 ampheres. The Ministry will modify it's specifications to suit any type system with outstanding performance.

Interested suppliers should send information on cost, lifetime, maintenance and general construction details to the Ministry of Communications, General Workshops, Division of Materials, 20 Hativat Goloni St. Haifa, Israel.

Other Foreign Official Tenders

MALAYSIA—The Secretary General, Ministry of Communications has issued Tender No. COMS/5 for the supply of VHF AM Communications Equipment for the aeronautical service. Bid deadline is June 21. Bid should offer 22 VHF AM 100 watt transmitters, 25 VHF AM radio receivers, and 18 supervisory and control equipment. Copies of tender announcement and specifications are available from the Secretary General, Ministry of Communications, Tingkat 4, Banqunan Kerajaan, Jalan Gurney, Kuala Lumpur or on a short-term loan basis to firms located in the U.S. from the Communications-Electronics Division, BDC-720, Room 1112, U.S. Dept. of Commerce, Washington, D.C. 20230, ★(202-967-4822).

INDIA—The Director General of Posts and Telegraphs has issued Tender No. I62-I06/71 TPL(CP) for crossbar/crosspoint or electronics automatic telephone exchanges. Bid deadline is July 6. Copies of tender announcement and specifications are available from the Director General, Posts and Telegraph, Parliament St., New Delhi—or on a short-term loan basis to firms located in the U.S. from the Communications-Electronics Division, BDC-720, Room 1112, U.S. Dept. of Commerce, Washington, D.C. 20230, ★(202-967-4823).

ARGENTINA—The Direccion Nacional de Vialidad (Argentine Highway Bureau), Avda, Maipu 3, Division Licitaciones, 5° Piso, Buenos Aires, invites bids for the **paving of a 27.4 kilometer road section, and the construction of 11 bridges** (with a total length of 378 meters) between the towns of Ceibas and Medanos, in the Province of Entre Rios. The budget for this project (Tender No. 445/72), partially financed by an Inter-American Development Bank loan, is 13.7 million Argentine pesos. Bid deadline June 22. Conditions are available for 200 Argentine pesos from the above-mentioned address.

MALAYSIA—The Secretary General, Ministry of Communications has issued Tender No. COMS/5 for the supply of VHF AM Communications Equipment for the aeronautical service. Bid deadline is June 21. Bid should offer twenty-two (22) VHF AM 100 watt transmitters, twenty-five (25) VHF AM radio receivers, and eighteen (18) supervisory and control equipment. Copies of tender announcement and specifications are available from the Secretary General, Ministry of Communications, Tingkat 4, Banqunan Kerajaan, Jalan Gurney, Kuala Lumpur, or on a short-term loan basis to firms located in the U.S. from the Communications-Electronics Division, BDC-720, Room 1112, U.S. Department of Commerce, Washington, D.C. 20230 ★(202-967-4822).

INDIA—The Posts and Telegraphs Dept., Calcutta, has issued Tender No. W-137/P-71/Y for **communications equipment**. Bid deadline is August 10. Bid should offer log periodic antenna, automatic alarm receiving equipment, watch keeping receivers, and alarm keyers. Copies of tender announcement and specifications available from India Supply Mission, 2536 Massachusetts Ave., NW.,Washington, D.C. 20008.

ALGERIA—The Radiodiffusion Television Algerienne has issued a tender for the supply of **audio equipment** for the re-equipment and development of audio frequency facilities for radio Algiers. Bid deadline August 31. Copies of tender announcement and specifications are available only from the Algerian Interests Sec., Embassy of the Republic of Guinea, 2118 Kalorama Rd., NW., Washington, D.C. 20008.

ALGERIA—The Ministry of Information has issued an invitation for bids for the supply and installation of a **150-meter steel tower for the television transmitting station** at Mecheria. Bid deadline August 31. The bid dossier for the project (Tender No. 246/E) may be obtained by sending $20 to: Direction des Services Techniques et de l'Equipment, 21, bd. des Martyrs, Alger, Algerie, Telex 91.014—Alger.

COLOMBIA—The Empresa de Acueducto y Alcantarillado de Bogota, D. E. (Bogota Water Works and Sewer Company) has announced a call for tenders for the construction of a **concrete wall dam and a dam with inside overflow (or spillway) locks**. The approximate quantities of work are as follows: (in cubic meters except as noted): dredge earth clearing, 615,000; hydraulic foundation, 215,000; waterproof lamp, filter, nucleous, shelter and transition zones, 200,000; various excavations, 130,000; concrete, 26,000; various refills, 73,000; steel reinforcing, 25,000 kilograms; assembly of equipment mounts and piping and installation. Specifications may be examined and purchased at the Direccion del Plan Maestro de Acueducto, Carrera 40 No. 22B-60 (3rd Floor), Bogota, Colombia. The cost of the documents is 2,500 Colombian pesos for the first copy and 500 pesos for each additional copy (21.50 pesos=US$1). These fees are non-refundable. Bids must be submitted to the above agency by June 19. The project is to be financed with funds provided by the World Bank.

PERU—The Empresa Nacional de Telecommunicaciones del Peru has issued a tender to bid to international suppliers for a **nation-wide telegraph exchange system**. Bid deadline is Sept. 26. Copy of proposal is available in Spanish on a short-term loan basis to firms located in the U.S. from the Communications-Electronics Div., BDC-720, Room 1112, U.S. Dept. of Commerce, Washington, D.C. 20230. ★(202-967-4822)

SINGAPORE—The Ministry of Communications has issued tender No. P1/4/72 for the supply of 80,000 lines of **telephone exchange switching equipment**. Bid deadline is July 28. Copies of tender announcement and specifications are available from the Ministry of Communications, Government Offices, St. Andrew's Rd., Singapore 6, or on a short-term loan basis to firms located in the U.S. from the Communications-Electronics Division, BDC-720 Room 1112, U.S. Dept. of Commerce, Washington, D.C., 20230 ★(202-967-4822)

SINGAPORE—The Telecommunication Authority has issued Tender No. 8787/M/PT1 for design, construction and installation of a **satellite earth station**. Bid deadline is August 11. Copies of tender announcement and specifications are available from the Singapore Telecommunications Auth., Box No. 7, Administration Sect., Connell House, One Anson Rd., Singapore 2, or on a short-term loan basis to firms located in the U.S. from the Communications-Electronics Division, BDC-720, Room 1112, U.S. Dept. of Commerce, Washington, D.C. 20230, ★(202-967-4822)

ALGERIA—The Ministere De L'Information Et De La Culture has issued Tender No. 236-E for the supply of **audio frequency equipment**. Bid deadline is August 31. Copies of tender announcement and specifications are available only from the Direction Des Services Techniques Et De L'Equipment 21 Boulevard Des Martyrs, Algiers.

ARGENTINA—The CIA Italo Argentina De Electricidad S.A. has issued Tender No. LI-32882 for the supply and installation of a **communications system**. Bid deadline is July 5. Copies of tender announcement and specifications are available only from the CIA Italo Argentina De Electricidad, Licitacion Internacional, San Jose 140, PISO 4, O.F. 480-2-D, Buenos Aires, for 100 pesos ($1 = 9.7 pesos).

ARGENTINA—The Argentine State Petroleum Entity (YPF), Av. R. S. Pena 777, Buenos Aires, invites bids for **remodeling the Campo Durán Refinery** to increase the output of its propane recovery facilities (Tender No. 197/72). Bidders should itemize the cost of engineering services, materials and equipment, and labor, including financing terms of the project. Bid deadline is June 26. Conditions are available for 1,000 Argentine pesos ($1 = 9.7 pesos) from the YPF at the address above.

TAIWAN—The Central Trust of China, Purchasing Department has issued Tender No. IB2C-610097 for the supply of **PCM carrier equipment**. Bid deadline is June 29. Bid should offer PCM carrier equipment, cable carrier telephone equipment (24 channels), carriers telephone equipment (12 channel), cables and jointing materials. Copies of tender announcement and specifications are available from the Central Trust of China, Purchasing Dept. 49, Wuchang St. Sec. 1 Taipei, or on a short-term loan basis to firms located in the U.S. from the Communications-Electronics Div., BDC-720, Room 1112, U.S. Department of Commerce, Washington, D.C. 20230. ★(202-967-4822)

INDIA—The Deputy Chief Engineer, Posts and Telegraphs, has issued Tender No. 162-106/71-TPL(CP) for the supply of **automatic telephone exchange equipment**. Bid deadline is 4 p.m. July 6. Copies of tender announcement and specifications are available only from the India Supply Mission, 2536 Massachusetts Ave., NW. Washington, D.C. 20008 for $2.70 per copy.

BRAZIL—Usinas Siderurgicas de Minas Gerais (Government steelworks) has a budget of $500,000 per year to purchase **scientific instruments** for its new research center in Ipatinga, Minas Gerais. Contact Joao Honorio, Chefe, Secao de Compras, Usinas Siderurgicas de Minas Gerais, Rua da Candelaria, 60—7° and Rio de Janeiro, GB–Brazil.

ALGERIA—M. le Directeur de l'Institut Hydrometeorologic, Cite des "Jardines," ambetta in Oran has issued Tender No. 72/I.H.F.R., with no bid deadline, for an Agrometeorologic Center for the gathering and the **automatic processing of agrometeorologic data**. Specifications are in French and bids must be submitted in French. Copy of specifications and terms available on a short loan basis from the Business, Photographic and Scientific Equipment Division, BDC-708, Room 1128, U.S. Dept. of Commerce, Washington, D.C. 20230, ★(202-967-2939).

ALGERIA—Design and construction of a **sodium tripolyphosphate plant** with the capacity of 20,000 tons/year. The project is divided into two sections: (1) engineering plant and (2) building of plant. Bidders are invited to submit either for one section or both. Tender No. 3 STPP. D.R.D., bid deadline has been extended to June 30. Societe Nationale des Industries Chimiques, Commission, des Marches 15, rue Victor Hugo–Hussein dey Alger, Algerie. Bid dossier may be obtained by sending 100 DA (approx. $20) to: Societe Nationale des Industries Chimiques 24, boulevard Zirout Youcef, Alger, Algerie

GUATEMALA—The Empresa Guatemalteca de Telecomunicaciones has issued Tender No. LP-1-72 for an **automatic telephone switchboard**. Bid deadline is July 4. Copies of tender announcement and specifications are available from the Empresa Guatemalteca de Planificacion, 7a Avenida 12-39, Zona 1, Guatemala City.

TAIWAN—The Purchasing Dept. of the Central Trust of China has issued Tender No. IB2C-610765 for **telephone exchanges with interface, power supply and air conditioning equipment**. Copies of tender announcement and specifications are available on a short-term loan basis to firms located in the U.S. from the Communications-Electronics Division, BDC-720, Room 1112, U.S. Department of Commerce, Washington, D.C. 20230, ★(202-967-4822).

IRAN—The Aria Cement Co., a public enterprise, invites experienced companies to participate in the Esfahan Project tender for a **slag cement plant** with a capacity of 3,000 tons a day of Portland clinker. Tender documents may be obtained from the company at 103 Takhte-Tavoos and Amir Atabak Corner (P.O. Box 1760), Tehran. Bid deadline is June 29. A set of the specifications may be reviewed in Room 2116 of the Construction, Water Resources & Eng. Div., U.S. Dept. of Commerce, Washington, D.C. ★(202-967-3602).

Investment, Licensing Checklist Available

The Commerce Department's Office of International Investment has revised, updated and expanded its *Foreign Investment and Licensing Checklist*, a comprehensive coverage of factors to consider in negotiating licensing agreements.

The checklist is designed to help businessmen develop their own checklists when exploring investment and licensing opportunities abroad. It covers problems associated with both the developing nations and developed countries.

Copies of the 13-page pamphlet are available at no charge at any Business Service Field Office listed on the inside back cover of this magazine.

Agencies

Field crop farms

01120—TAIWAN—Raw cotton. K. H. Trade International, Ltd. (importer, agent, exporter), 33, Lane 106, Pateh Rd., Sec. 3, Taipei. WTD in prep.

Livestock farms

01320—AUSTRIA—Dairy cows, Holstein, 800 to 1,000 cows for export to Eastern Europe. Big Dutchman G.m.b.H., Mr. Gilbert van Putte (dist.), Schwedenplatz 2, A-1010 Vienna.

Meat products

20139—SWITZERLAND—Natural sausage casings. Rinderknecht & Co., Attn.: Mr. S. Schlund, Dir. (agent), Dreikönigstr. 7, P.O. Box 379, 8022 Zurich. WTD 3/72.

Canning, preserving foods

20331—JAMAICA—Canned fruits. Samples, brochures, price list c.i.f. requested. Levy Brothers Ltd., Attn: Vernon da Silva (importer, dist., agent), 44 Port Royal St., Kingston. WTD 7/71.

Beverage industries

20870 — THAILAND — Oyster flavoring extracts, concentrated, powder, packed in drums. Requests literature, c.i.f. Bangkok prices. Kingsway Enterprises (importer, dist.), 465/41-43 Soi Suan Plu (Behind Prasart Court), South Sathorn Rd., P.O. Box 2711, Bangkok. WTD 7/71.

Broad woven fabric mills, cotton

22113—SURINAM—Plain and printed cotton fabrics suitable for women's, children's dresses. Winkel Lolita (importer, dist., retailer), Maagdenstraat 5 beneden, Paramaribo. WTD in prep.

22117 — SOUTH AFRICA — Dress materials: cotton, plain, printed, finished; approximately 40¢ to $1 per yd. A. S. Walker & Co. (Pty.) Ltd. (mfr.'s agent), P.O. Box 1787, Cape Town, Cape Province. WTD 7/71.

Broad woven fabric mills, manmade fiber, silk

22211 — SOUTH AFRICA — Drapery, upholstery fabrics. A. S. Walker & Co. (Pty.) Ltd. (mfr.'s agent), P.O. Box 1787, Cape Province. WTD 7/71.

22213—SURINAM—Printed and plain rayon fabrics suitable for women's, children's dresses. Winkel Lolita (importer, dist., retailer), Maagdenstraat 5 beneden, Paramaribo. WTD in prep.

22218 — SOUTH AFRICA — Dress materials: manmade fiber, plain, printed, finished; approximately 40¢ to $1 per yd. A. S. Walker & Co. (Pty.) Ltd. (mfr.'s agent), P.O. Box 1787, Cape Town, Cape Province. WTD 7/71.

Knitting mills, products

22511—SURINAM—Women's nylon full fashion hose, panty hose. Winkel Lolita (importer, dist., retailer), Maagdenstraat 5 ben., Paramaribo. WTD in prep.

Dyeing, finishing textiles

22628—NEW ZEALAND—Finished synthetic broad-woven fabrics, dyed and printed for clothing, furnishings. Fraser Napier & Co. Ltd., Attn: Mr. Alexis Harris (importer, dist., agent), P.O. Box 2697, Wellington. WTD in prep.

Men's, boys' furnishings

23214—SURINAM—Men's, boys' sport, dress shirts. Winkel Lolita (importer, dist., retailer), Maagdenstraat 5 Beneden, Paramaribo. WTD in prep.

23215—SURINAM—Men's, boys' lightweight nightwear. Winkel Lolita (importer, dist., retailer), Maagdenstraat 5 Beneden, Paramaribo. WTD in prep.

23221—SURINAM—Men's, boys' underwear; knit, woven. Winkel Lolita (importer, dist., retailer), Maagdenstraat 5 ben., Paramaribo. WTD in prep.

23271—SURINAM—Men's, boys' dress, sport trousers. Winkel Lolita (importer, dist., retailer), Maagdenstraat 5 ben., Paramaribo. WTD in prep.

Women's, misses', juniors' outerwear

23351 — SURINAM — Women's dresses. Winkel Lolita (importer, dist., retailer), Maagdenstraat 5 beneden, Paramaribo. WTD in prep.

Women's, misses,' infants' undergarments

23412—SURINAM—Ladies,' children's underwear. Winkel Lolita (importer, dist., retailer), Maagdenstraat 5 beneden, Paramaribo. WTD in prep.

23413 — SURINAM — Women's, girls' nightwear. Winkel Lolita (importer, dist., retailer), Maagdenstraat 5 beneden, Paramaribo. WTD in prep.

Fabricated textile products

23920 — SWEDEN — Shower curtains. Bädd & Bad AB (importer, agent), Fack 3037, S-250 03 Helsingborg. WTD 4/72.

Converted paper, paperboard items

26490—SWITZERLAND — Attractively designed, or novel stationery articles of all kinds including pens, rubbers, staplers, fixation materials, supplies for offices, schools, other applications. IBA AG, Attn: Peter L. Basci, Pres. (importer, dist., agent), Schläflistr. 17, 3000 Bern, 25. WTD in prep.

Books

27313—SWITZERLAND — Programmed educational materials for combined application with books, films, slides, tape recorders. IBA AG., Attn: Peter L. Basci, Pres. (importer, dist., agent), Schläflistr. 17, 3000 Bern, 25. WTD in prep.

Industrial chemicals

28151—SWITZERLAND — Cyclic acids, intermediates, resorcinol. Requests offers from manufacturers only. Rinderknecht & Co., Attn.: Mr. S. Schlund, Dir. (agent), Dreikönigstr. 7, P.O.B. 379, 8022 Zurich. WTD 3/72.

28152—SWITZERLAND—Synthetic organic dyes. Requests offers from manufacturers only. Rinderknecht & Co., Attn. Mr. S. Schlund, Dir. (agent), Dreikönigstr. 7, P.O.B. 379, 8022 Zurich. WTD 3/72.

28153—SWITZERLAND—Synthetic organic pigments, requests offers from manufacturers only. Rinderknecht & Co., Attn.: Mr. S. Schlund, Dir. (agent), Dreikönigstr. 7, P.O. Box 379, 8022 Zurich. WTD 3/72.

28182—SWITZERLAND — Trichlorethylene, perchlorethylene, synthetic methyl alcohol, acyclic derivates, amines, amidopyrine, phenolic alcohols, ethyl ether, ethyl acetate, ethylene glycol alcohols. Requests offers from manufacturers only. Rinderknecht & Co., Attn: Mr. S. Schlund, Dir. (agent), Dreikönigstr. 7, P.O.B. 379, 8022 Zurich. WTD 3/72.

28193—SWITZERLAND — Sulfamides. Requests offers from manufacturers only. Rinderknecht & Co., Attn: Mr. S. Schlund, Dir. (agent), Dreikönigstr. 7, P.O. Box 379, 8022 Zurich. WTD 3/72.

28194—SWITZERLAND—Acetate acids, amino derivates. Requests offers from manufacturers only. Rinderknecht & Co., Attn: Mr. S. Schlund, Dir. (agent), Dreikönigstr. 7, P.O.B. 379, 8022 Zurich. WTD 3/72.

28199—SPAIN—Reagent grade inorganic chemicals. Instituto de Dermatología Cosmética A.L.E.J.O. (mfr.), Avda. Menéndez Pelayo, 13, Madrid (9). WTD 4/72.

28199 — SWITZERLAND — Siliconfluoride, natrium phosphates. Requests offers from manufacturers only. Rinderknecht & Co., Attn.: Mr. S. Schlund, Dir. (agent), Dreikönigstr. 7, P.O.B. 379, 8022 Zurich. WTD 3/72.

Synthetic materials

28214—SWITZERLAND—Epoxy resins, phenolic acids. Requests offers from manufacturers only. Rinderknecht & Co., Attn: Mr. S. Schlund, Dir. (agent), Dreikönigstr. 7, P.O.B. 379, 8022 Zurich. WTD 3/72.

Soap, detergents, cleaning preparations, perfumes, cosmetics

28441 — TAIWAN — Shaving preparations. Agency including sales to military exchange. Orient Trading & Industry, Ltd. (importer, agent), P.O. Box 3240, Taipei. WTD in prep.

28442—SPAIN—Perfumes, toilet water, colognes. Instituto de Dermatología Cosmética A.L.E.J.O. (mfr.), Avda. Menéndez Pelayo, 13, Madrid (9). WTD 4/72.

28442 — TAIWAN — Perfumes, colognes. Agency including sales to military exchange. Orient Trading & Industry, Ltd. (importer, agent), P.O. Box 3240, Taipei. WTD in prep.

28443—SPAIN—Hair preparations. Instituto de Dermatología Cosmética A.L.E.J.O. (mfr.), Avda. Menéndez Pelayo, 13, Madrid (9). WTD 4/72.

28443 — TAIWAN — Hair preparations. Agency including sales to military exchange. Orient Trading & Industry, Ltd. (importer, agent), P.O. Box 3240, Taipei. WTD in prep.

28444 — TAIWAN — Dentifrices, mouthwashes, related products. Agency including sales to military. Orient Trading & Industry, Ltd. (importer, agent), P.O. Box 3240, Taipei. WTD in prep.

28445—SURINAM—Cosmetics produced from natural ingredients for natural products clientele. House of Beauty (importer, agent, retailer), Rust en Vredestraat 48, Paramaribo. WTD in prep.

28445 — TAIWAN — Cosmetics, toilet preparations. Agency including sales to military exchange. Orient Trading & Industry, Ltd. (importer, agent), P.O. Box 3240, Taipei. WTD in prep.

Paints, varnishes, lacquers, enamels

28518—GERMANY—Sealing and preservation compounds for construction industry. Bau-Chemie Giessen/Lahn Schultz K.G. (dist., mfr.), 3 Margarethenhuette, 6300 Giessen. WTD 5/72.

Agricultural chemicals

28712—SWITZERLAND—Complete, incomplete fertilizers, fertilizer materials. Requests offers from manufacturers only. Rinderknecht & Co., Attn: Mr. S. Schlund, Dir. (agent), Dreikönigstr. 7, P.O.B. 379, 8022 Zurich. WTD 3/72.

Chemical products

28992—SWITZERLAND — Fatty acids, all kinds. Requests offers from manufacturers only. Rinderknecht & Co., Attn: S. Schlund, Dir. (agent), Dreikönigstr. 7, P.O.B. 379, 8022 Zurich. WTD 3/72.

28993—AUSTRIA—Chemical compounds for treatment of water, waste water, e.g., flocking agents, etc. Offers for proprietary or patented products. Walter Kneidinger (mfr.), A-4121 Altenfelden Doppl. WTD in prep.

28993—SWITZERLAND—Essential oils, citrus oil, peppermint oil. Requests offers from manufacturers only. Rinderknecht & Co., Attn: Mr. S. Schlund, Dir. (agent), Dreikönigstr. 7, P.O.B. 379, 8022 Zurich. WTD 3/72.

Paving, roofing materials

29510—GERMANY—Liquid asphalt with additives for special thin film paving. Bau-Chemie Giessen/Lahn Schultz K.G. (dist., mfr.), 3 Margarethenhuette, 6300 Giessen. WTD 5/72.

29523 — JAMAICA — Asphalt roofing shingles: simulated wood design in random sizes for rustic appearance. Brochures, technical literature, price list requested. Kiw Hardware Ltd., Attn: John Davis (importer, dist., agent), 138 Spanish Town Rd., Kingston 11. WTD in prep.

Glass, glassware

32210—AUSTRALIA—Drinking glasses for household, commercial use. Whimpex Australia Ltd. (importer, agent), P.O. Box 152, Hamilton Queensland 4006. WTD in prep.

32294—TAIWAN—Scientific, laboratory glassware. Sen Te Hong Import & Export Co. (importer, agent, exporter), 53–10 Ku Shan 1st Rd., Kaohsiung 800. WTD in prep.

Pottery, related products

32610—JAMAICA—Vitreous and semivitreous plumbing fixtures, accessories and fittings for household and institutional bathrooms. Brochures, price list requested. Kiw Hardware Ltd., Attn: John Davis (importer, dist., agent), 138 Spanish Town Rd., Kingston 11. WTD in prep.

32610—SWEDEN—Towel hooks. Bädd & Bad AB (importer, agent), Fack 3037, S-250 03 Helsingborg. WTD 4/72.

Heating, plumbing fixtures

34330—ENGLAND—Industrial burners; industrial process air heaters fired on gas or liquid fuels. Caid Engineers Ltd., Attn: R. H. Campbell, Dir. (mfr.), 22 The Broadway, Maidstone, Kent. WTD in prep.

Metal stampings

34615 — SURINAM — Cooking utensils made of CR-NI-18-10 steel having characteristic of requiring no water or fat for most cooking. International Trading Co. (importer, dist., agent), P.O.B. 455, Paramaribo. WTD 4/72.

Fabricated wire products

34814 — GERMANY — Hexagonal wire netting for hydraulics; c.i.f. Bremen or Hamburg; net cash upon receipt of invoice; delivery conditions: as per agreement. Correspondence requested in German. Uher, Adolf, Drahwarenfabrikation (dist., mfr., agent), D-822 Traunstein, Hofgasse 2. WTD 4/72.

Fabricated metal products

34970—SWITZERLAND — Self-adhesive foils, sheets, tapes of all kinds for decorative purposes, used by building industry and do-it-yourself centers. Items in question may also be useable as sealing or insulating materials. IBA AG, Attn: Peter L. Basci, Pres. (importer, dist., agent), Schläflistr. 17, 3000 Bern 25. WTD in prep.

35192 — NEW ZEALAND — Diesel engines, 15 to 50 hp., for industrial, agricultural applications. Brown Brothers Engineers Ltd., Attn: Neville Dodd (dist., mfr., agent), P.O. Box 548, Christchurch. WTD 5/71.

Construction, mining, materials handling machinery, equipment

35317—ARGENTINA — Track-laying tractor-shovel loaders. Offers from manufacturing companies only. Exclusive agency. PAVEX, S.A. (importer, dist., agent), Sarmiento 470, Piso 3°, Ofic. 304, Buenos Aires. WTD 10/71.

35318—ARGENTINA—Motor graders, scrapers, rollers. Offers from manufacturing companies only. Exclusive agency. PAVEX, S.A. (importer, dist., agent), Sarmiento 470, Piso 3°, Ofic. 304, Buenos Aires. WTD 10/71.

Metalworking machinery

35482—SWITZERLAND—Genuine novelty power tools, 220V 50 cycles. Jura Electric Appliances L. Henzirohs AG (dist., mfr.), Attn: Mr. Ivo Gut-Georges, Sales Mgr., 4626 Niederbuchsiten. WTD in prep.

Special industry machinery

35521 — TAIWAN — Textile machinery. K. H. Trade International, Ltd. (importer, agent, exporter), 33, Lane 106, Pateh Rd., Sec. 3, Taipei. WTD in prep.

35540—PORTUGAL—Paper and pulp mill machinery. SOFOMIL-Sociedade Fornecedora de Maquinas Industriais, Lda. (importer, dist., agent), Rua Joaquim Bonifacio 2–1º, (Apartado 1340), Lisbon. WTD in prep.

35591—PORTUGAL — Chemical, petrochemical manufacturing industries machinery, equipment. SOFOMIL-Sociedade Fornecedora de Maquinas Industriais, Lda. (importer, dist., agent), Rua Joaquim Bonifácio 2–1º, (Apartado 1340), Lisbon. WTD in prep.

5595 — PORTUGAL — Automatic packaging machinery for use in pharmaceutical industry; tablet making equipment, complete line for production of pharmaceutical syrups, suppositories. CONCESSUS, S.A.R.L. (importer, dist., agent), Rua Dom Francisco Manuel de Melo, 9, Lisbon 1. WTD in prep.

General industrial machinery

35610—ENGLAND—Liquified petroleum gas pumps; general purpose pumps. Caid Engineers Ltd., Attn: R. H. Campbell, Dir. (mfr.), 22 The Broadway, Maidstone, Kent. WTD in prep.

35640—ENGLAND—Fans; air filters. Eaton-Williams Products Ltd., Attn: L. Armer, Marketing Mgr. (dist., mfr.), Station Rd., Edenbridge, Kent. WTD in prep.

Office, computing, accounting machines

35731 — SWITZERLAND — Electronic data processing equipment for commercial (business) use, collection and input equipment; compact computers; electronic mini-calculators for desk use. Allorgan AG, Attn: H. B. Wallimann, Mng. Dir. (dist., retailer), General Guisan Strasse 52, 5001 Aarau. WTD 4/71.

35741—SWITZERLAND—Electronic accounting, invoicing machines, electronic desk calculators. Allorgan AG, Attn: H. B. Wallimann, Mng. Dir. (dist., retailer), General Guisan Strasse 52, 5001 Aarau. WTD 4/71.

35791—SWITZERLAND—Novelty dictation machines for office use; other novelty office machines. Allorgan AG, Attn: H. B. Wallimann, Mng. Dir. (dist., retailer), General Guisan Strasse 52, 5001 Aarau. WTD 4/72.

Service industry machinery

35812 — GUATEMALA — Coin operated pin bowling equipment. Rafael Castillo Lara–Almacenes "Concordia" (importer, dist., agent), 7a. Avenida y 18 Calle, Zona 1, Guatemala City. WTD 5/72.

35850—ENGLAND—Humidifiers. Eaton-Williams Products Ltd., Attn: Mr. L. Armer, Marketing Mgr. (dist., mfr.), Station Rd., Edenbridge, Kent. WTD in prep.

35850—GERMANY—Commercial refrigeration equipment; industrial refrigeration equipment, particularly for treatment of hot waste water (heat pollution control equipment). Kaeltetechnik Lasar & Co. KG. (mfr.), 5400 Koblenz, Triererstr. 259. WTD 5/72.

35852—FRANCE—Domestic, industrial, automotive airconditioning equipment. Exclusive rights required. P. R. Ballar (importer, dist., agent), 12, Ave. Montaigne, 75–Paris 8e. WTD in prep.

35892 — FRANCE — Filter systems for home swimming pools. International Swimming Pool–Piscines Florida (importer, dist., agent), "Sainte Appoline," Boîte Postale No. 15, 78-Plaisir. WTD 12/71.

Electric transmission, distribution

36112 — ENGLAND — Advanced technology very wide band width oscilloscopes. Farnell Instruments Ltd., International Marketing Div., Attn: M. E. Sebright (importer, dist., mfr.), 25A Hermitage Rd., London, N.4. WTD in prep.

36112 — NETHERLANDS — Electric measuring and testing equipment, including oscilloscopes, chart recorders, panel-mount meters, digital meters, multi meters, sweep generators. Exclusive agency. Tempofoon B. V., Attn: L. Mayer, Gen. Mgr. (importer, dist./assembler), 8 Kap. Hatterasstraat, or P.O. Box 540, Tilburg. WTD 4/72.

36113 — ENGLAND — High technology advanced frequency synthesizers. Farnell Instruments Ltd., International Marketing Div., Attn: M. E. Sebright (importer, dist., mfr.), 25A Hermitage Rd., London, N.4. WTD in prep.

36113—NETHERLANDS—Special electric measuring and testing equipment, including panelmount meters, chart recorders, multi meters, oscilloscopes, digital meters, sweep generators. Exclusive agency. Tempofoon B. V., Attn: L. Mayer, Gen. Mgr. (importer, dist., assembler), 8 Kap. Hatterasstraat, or P.O. Box 540, Tilburg. WTD 4/72.

Electrical industrial apparatus

36220 — GERMANY — Air conditioning control assemblies. Kaeltetechnik Lasar & Co. KG. (mfr.), 5400 Koblenz, Triererstr. 259. WTD 5/72.

Household appliances

36340—SWITZERLAND—Genuine novelty, electric housewares, all kinds; 220V 50 cycles. Jura Electric Appliances L. Henzirohs AG (dist., mfr.), Attn: Mr. Ivo Gut-Georges, Sales Mgr., 4626 Niederbuchsiten. WTD in prep.

Electric lighting, wiring equipment

36426 — SWITZERLAND — Flashing lights and beacons for signalization purposes and application by police, similar organizations. Portable battery powered lamps. Stradeg Signalisation, Attn: Bernard Grezet (importer, dist.), Chemin du Préan 5, 1009 Pully, Lausanne. WTD 4/72.

Communication equipment

36612—ETHIOPIA—Telephone and telegraph (wire) apparatus, equipment, components. N. E. Papassinos (importer, dist., agent), Cunningham St., P. O. Box 1698, Addis Ababa. WTD 3/72.

36620 — ENGLAND — Laser accessories, image tubes. Instrument Technology Ltd., Attn: F. E. Barlow (importer, dist., export), 67 Lower Rd., Kenley, Surrey. WTD 12/71.

36620 — SWITZERLAND—Traffic lights for signalization of accidents, construction sites etc., portable, battery powered or for stationary installation. Stradeg Signalisation, Attn: Bernard Grezet (importer, dist.), Chemin du Préan 5, 1009 Pully–Lausanne. WTD 4/72.

36621—ETHIOPIA—Commercial electronic communication equipment. N. E. Papassinos (importer, dist., agent), Cunningham St., P. O. Box 1698, Addis Ababa. WTD 3/72.

36622—MALAYSIA—Radio transmitters (broadcasting). Euco Engineers Sdn. Bhd. (importer, dist., agent), 2 Jalan Mountbatten, Kuala Lumpur. WTD 4/72.

36623—SWITZERLAND — Signalization material of all kinds for air, railway, street traffic. Stradeg Signalisation, Attn: Bernard Grezet (importer, dist.), Chemin du Préan 5, 1009 Pully–Lausanne. WTD 4/72.

36623—ENGLAND — Products which complement but do not duplicate a system for warning, monitoring and controlling ice on highways. Findlay, Irvine Ltd. (dist., mfr., exporter), Penicuik, Midlothian, Scotland. WTD 4/71.

36625 — AUSTRALIA — Fire control equipment. Weather-Matic Proprietary Ltd. (dist., agent, retailer), 30 O'Connell St., Kangaroo Point, Queensland 4109. WTD in prep.

Electronic components, accessories

36710—GERMANY—Receiving type electron tubes. Eisenbeiss-Elektronik oHG. (importer, dist., agent), 38 Hasslocher Str., 6096 Raunheim/Hessen. WTD 9/71.

36720—GERMANY—Transmitting type electron tubes. Eisenbeiss-Elektronik oHG. (importer, dist., agent), 38 Hasslocher Str., 6096 Raunheim/Hessen. WTD 9/71.

36730—ITALY—Electronic tubes. Pasini Elettronica S.p.A. (dist.), Via Antonio da Recanate 4, Milan. WTD 2/72.

36740—GERMANY—Semiconductor devices, all kinds. Eisenbeiss-Elektronik oHG. (importer, dist., agent), 38 Hasslocher Str., 6096 Raunheim/Hessen. WTD 9/71.

36795—GERMANY — Relays, switches, other controls for electronic application. Eisenbeiss-Elektronik oHG. (importer, dist., agent), 38 Hasslocher Str., 6096 Raunheim/Hessen. WTD 9/71.

Electrical machinery, equipment, supplies

36930—ENGLAND—Equipment closely related to hearing aids for profoundly deaf (geriatric aural aid) specifically excluding conventional hearing aids. Leyton Instrument Co. Ltd. (importer, mfr., exporter), 163 Oxford Rd., Reading, Berkshire RG1 7XP. WTD 3/72.

Engineering, laboratory, scientific, research instruments

38112—TAIWAN—Laboratory, scientific instruments. Sen Te Hong Import & Export Co. (importer, agent, exporter), 53-10 Ku Shan 1st Rd., Kaohsiung 800. WTD in prep.

Instruments for measuring, indicating, controlling, physical characteristics

38213 — GERMANY — Measuring and control instruments for environmental pollution control; application in industrial refrigeration and air conditioning systems of all types. Kaeltetechnik Lasar & Co. KG. (mfr.), 5400 Koblenz, Triererstr. 259. WTD 5/72.

38213—NETHERLANDS — Process control equipment for industrial, marine use. Agency for Benelux area. N. V. Observator, Attn: J. B. Reukers, Sales Mgr. (importer, dist./exporter, installer, integrator), 30 Vasteland, or P.O. Box 1291, Rotterdam–3002. WTD 4/72.

38216 — AUSTRALIA — Fire control sprinkler systems. Weather-Matic Proprietary Ltd. (dist., agent, retailer), 30 O'Connell St., Kangaroo Point, Queensland 4109. WTD in prep.

Surgical, medical, dental instruments

38410—MALAYSIA—Surgical, medical instruments. Euco Engineers Sdn. Bhd. (importer, dist., agent), 2 Jalan Mountbatten, Kuala Lumpur. WTD 4/72.

38410 — SWITZERLAND — Advanced surgical and medical instruments and apparatus, hospital and medical laboratory equipment; fetal pulse defectors; portable physicians EKG miniaturized kits; medical/operational laser cutting equipment; baby and intensive care equipment; operating room equipment; hospital catering equipment; surgical prosthetic and medical laboratory appliances and supplies; hospital disposables. Henri Isler (importer, agent), P.O. Box 42, 1000 Lausanne 19. WTD in prep.

38410 — SWITZERLAND — Disposable syringes, needles, combinations of needles, injection instruments, similar medical supplies. IBA AG, Attn: Peter L. Basci, Pres. (importer, dist., agent), Schläflistr. 17, 3000 Bern, 25. WTD in prep.

38420—SWITZERLAND—Paper articles in form of bandages, plasters, similar items for hygenic, general medical, hospital applications. IBA AG, Attn: Peter L. Basci, Pres. (importer, dist., agent), Schläflistr. 17, 3000 Bern, 25. WTD in prep.

38421 — SWITZERLAND — Surgical, prosthetic and medical laboratory appliances, supplies; hospital disposables. Henri Isler (importer, agent), P.O. Box 42, 1000 Lausanne 19. WTD in prep.

38424—ENGLAND—Equipment closely related to auditory training aids for profoundly deaf. Specifically excluding conventional hearing aids. Leyton Instrument Co., Ltd. (importer, mfr., exporter), 163 Oxford Rd., Reading, Berkshire RG1 7XP. WTD in prep.

Photographic equipment, supplies

38611—SWITZERLAND — Novel overhead projectors, demonstration apparatus and similar equipment for schools, universities, laboratories, etc. IBA AG, Attn: Peter L. Basci, Pres. (importer, dist., agent), Schläflistr. 17, 3000 Bern 25. WTD in prep.

38613—FRANCE—16mm and 35mm motion picture equipment parts, accessories. S.F.A.R.E. Victoria Elect (importer, agent), 28, rue de Constantinople, 75–Paris 8. WTD in prep.

Toys, amusement, sporting goods

39410—NEW ZEALAND—Toys. Gillette (New Zealand) Ltd., Attn: P. Birch, Mng. Dir. (importer, dist., mfr.), P.O. Box 30369, Lower Hutt. WTD 4/72.

39493—FRANCE — Hockey equipment; ski shoes; skating shoes; snowboots. Ste d'Exploitation et de Construction d'Ensembles Sportifs (dist.), 5, rue Jean Pigeon, 94–Charenton. WTD in prep.

Pens, pencils, office, artists' materials

39510—NEW ZEALAND—Writing instruments. Gillette (New Zealand) Ltd., Attn: P. Birch, Mng. Dir. (importer, dist., mfr.), P.O. Box 30369, Lower Hutt. WTD 4/72.

Manufacturing industries

39990—SWITZERLAND — Transparencies, slides, similar educational materials for overhead projection at schools, colleges etc., (e.g. visual aids such as geographic maps, chemical and mathematic formulas and related demonstration materials for educational purposes). IBA AG, Attn: Peter L. Basci, Pres. (importer, dist., agent), Schläflistr. 17, 3000 Bern 25. WTD in prep.

Future Construction Abroad

FRANCE—A report on approximately **80 French construction projects (mainly apartment buildings)** providing information relative to the type of construction project and its size, the status of plans, and the name and address of the construction firm in charge of the project, is available from the Construction, Water Resources & Engineering Services Div., BDC-742, U.S. Dept. of Commerce, Washington, D.C. 20230, ★ (202-967-3602), and the U.S. Dept. of Commerce Field Office, 11444 Federal Bldg., 450 Golden Gate Ave., San Francisco, Calif. 94102, ★ (415-556-5864).

FINLAND—Rautaruukki Oy, the Finnish state-controlled steel manufacturer, aims at doubling its steel production during the present decade. The next stage involves construction of **an additional oxygen plant and an additional lime burning plant at Raahe**. Rautaruukki is also activly considering the manufacture of large-diameter steel pipe. Write: Helge Haavisto, Managing Director, Rautaruukki Oy, Fredrikinkatu 53-55, 00100 Helsinki 10.

INDONESIA—A memorandum of conversation with two officials in the Djakarta Planning Board which outlines Djakarta's **government structure, budget and development priorities** is available to interested U.S. firms from the U.S. Department of Commerce, Business Opportunities Division, BDC-584, Rm. 4813, Washington, D.C. 20230.

PERU—The Director General of Air Transport, Ministry of Transport and Communications, wishes U.S. consulting firms experienced in airport construction to communicate with his office in connection with a feasibility study of the Ministry to **construct or remodel eleven airports** in Peru to accomodate jet aircraft. Among other things the study will consider sources of financing for the construction works. U.S. firms must be associated with Peruvian engineering and/or consulting firms to obtain contracts in Peru. Communicate with: Mayor General F.A.P. Victor Velasquez Vercelli, Director General for Air Transport, Ministry of Transport and Communication, Av. 28 de Julio y Garcilaso de la Vega, Lima.

KOREA—The Government has applied for a $3.7 million Asian Development Bank (ADB) loan to help finance the construction of **five vocational or skilled labor institutes**. The loan would be used to import equipment for the training schools, and the plan is to train 3,180 students annually in such lines as castings, wood molds, machinery, machinery assembly, plating, welding, electricity, electronics, wood manufactures, printing, metallurgy and textiles. The project is planned for completion by 1974. Contact Mr. Ih-Chang Cho, Administrator, Office of Labor, Government of the Republic of Korea, #27-1, Supyo-dong, Chung-ku, Seoul.

GREECE—The Government has approved **the purchase through international tenders of $251.5 million worth of goods** for governmental and quasi-governmental agencies during 1972. The program includes purchases of $95.7 million telecommunications equipment, $38.9 million plant machinery and equipment, $25.8 million scientific instruments and apparatus, $11.8 million automotive vehicles, $7.8 million railway equipment, $7.6 million medical apparatus and instruments and various other products. A condensed table giving a breakdown of the main categories is available from the U.S. Department of Commerce, Business Opportunities Division, BDC-584, Rm 4813, Washington, D.C. 20230.

SOUTH AFRICA—The South African Iron and Steel Industrial Corp. (ISCOR) will request tenders in the near future for projects connected with ISCOR's **expansion program at the Sishen iron ore mine and the proposed port at Saldanha Bay**. ISCOR will request proposals for the design, supply, erection, testing, and commissioning of: (1) primary, secondary, and tertiary iron ore crushing plant, (2) washing and screening plant, (3) heavy media separation plants for both coarse and fine iron ore, (4) quaternary and fines crushing and screening plants, (5) slimes thickening, clarified water pumping, and slimes disposal plants, (6) external electric power distribution network, (7) blending, reclaiming, and truck loading plants, and (8) harbor stockpiling, screening, crushing, blending, reclaiming, and ship loading installations. Contact the Head, Capital Buying, South African Iron and Steel Industrial Corp., Ltd., P.O. Box 450, Pretoria.

NICARAGUA—The Ministry of Defense has contracted with the Nicaraguan engineering firm Santos & Heilemann Cia. Ltda., Apartado Postal 1653, Managua, for feasibility studies of a proposed **expansion of Las Mercedes International Airport and modernization of Los Brasiles airstrip**, both in Managua. Foreign purchases, estimated at $292,000, will include the purchase and installation of an instrument landing system (ILS), single side band (SSB) and radio facsimile communication equipment, a 15-channel, 24-hour recorder, high intensity lighting for runways, and distance measuring equipment (DME/VOR). Bids will be requested when local financing is available.

CANADA—Natural Resources Minister Wilfred G. Bishop, New Brunswick Provincial Government, Campbell St., Fredericton, N.B., has announced a $10.7 million **expansion and improvement program for the Health Steele mine and mill** some forty miles north of Newcastle, N.B. Heath Steele processes copper, lead and zinc. Additional information may be obtained from him or the mine owners, American Metals Climax.

THAILAND—Three major projects are planned: Building **2,000 miles of highways** valued at about $180 million. Write Lt. Col. Prathom Buranasiri, Director of Planning Div., Rama VI Rd. and Sri Ayudhya Rd., Bangkok—An **elevated road system in Bangkok**. Write Puang Suwanarat, Under Secretary of State, Ministry of Interior, Asdang Rd., Bangkok—A **634-bed hospital** for the Chinese community in Thailand. Write Swek Swekpikul, manager, Hua Khiew Poh Teck Tung Foundation, 326 Chao Kamrop Rd., Off Suapa Rd., Bangkok.

FRANCE—Construction of a **new airport at Satolas,** twenty kilometers east of Lyon, has begun. The airport, costing about $100 million, should begin partial operations by the end of 1974. Two additional runways will be built about 1977. Civil Engineering contracts have been let; bids for airport equipment are expected sometime between July and December. U. S. firms should send product literature and prices immediately to Service Technique de la Navigation Aerienne, 246 rue Lecourbe, Paris 15, attention Mr. Janton, Director, Department Installation. U.S. firms should concentrate on airport equipment of advanced design which is not competitive with equipment already made in France.

CYPRUS—The rapidly expanding tourist industry island of Cyprus has created a favorable export climate for U.S. firms which can furnish **equipment, supplies or services for the lodging industry.** Nineteen new hotels under construction and additions being made to four existing hotels will add more than 3,900 beds to the supply. The number of visitors to the island is growing rapidly, and suitable hotel rooms have been in tight supply. Current construction will help to relieve this situation and will provide facilities for the predicted 22% to 25% increase in the number of foreign visitors. The U.S. Embassy at Nicosia considers that hotel supplies and equipment will be in great demand, as will all types of leisure time and sporting goods. A list of hotels under construction or being expanded is available from the Service Industries Division, BDC-736, U.S. Department of Commerce, Washington, D.C. 20230, (202-967-5678).

BRAZIL—A sanitary sewer collection system extending some five miles offshore from Rio de Janeiro will discharge all the sewage from the Northern zone of the State of Guanabara and the adjoining area of the State of Rio de Janeiro. The National Housing Bank, an agency of the Brazilian Ministry of the Interior, will extend a line of credit of approximately $140 million for project studies, civil construction and purchase of equipment. The State Government Agencies directly responsible for this project and its contracting are: Superintendencia de Urbanizacao e Saneamento-SURSAN, Av. Erasmo Braga, 118-D, Rio de Janeiro, GB, President: Eng. Alcione Jose da Rocha and Secretaria de Saude e Saneamento do Estado do Rio de Janeiro, Palacio Nilo Pecanha, Rua Visconde Sepetiba, Niteror, R. J., Secretary: Dr. Astor de Melo, President of SANERJ: Eng. Edgar Faquer.

FRANCE—Avions Marcel Dassault has begun construction of **four new plants for production of the Mercure short-range aircraft.** The firm expects to spend $56 million on this project during the next three years. The plants will be located at Seclin near Lille (production of high precision and large mechanical parts) in Poitiers (general production and assembly), at Martignas (wing assemblies), and at Istres (final assembly) Interested U.S. firms should contact Mr. Thuillier, Directeur des Travaux, Avions Marcel Dassault, 42 allee de Saint-Cucufa, 92 Vaucresson, for further information.

SOUTH AFRICA: The South African Iron and Steel Industrial Corporation (ISCOR) has announced that it will spend $133 million within the next two years to combat environmental pollution. ISCOR's Chairman, Dr. T. F. Muller, said that control of water and air pollution will amount to 5-7 percent of the capital expenditure for a new steel works. Interested firms should contact the South African Iron and Steel Industrial Corp., Ltd., P.O. Box 450, Pretoria, South Africa.

ARGENTINA—YPF (Yacimientos Petroliferos Fiscales), The Argentine State Petroleum Co., has listed the following refinery expansion and new construction plans: **ISAURA, S.A.,** at Bahia Blanca. Consists of a Visbreaker of 2,205 b/d, catalytic cracker of 2,520 b/d, and a hydrotreater of 1,575 b/d, all expected to be in service in 1975. **YPF—La Plata Refinery**—pipe still of 75,000 b/d, for completion in 1976 at a cost of $12.5 million. **YPF—Plaza Huincul Refinery**—pipe still of 18,000 b/d, for completion in 1973, at a cost of $7.4 million. **YPF—Plaza Huincul Refinery**—catalytic refining unit with a 2,500 b/d capacity, with scheduled completion in 1973 at a cost of $7.4 million. **YPF—Rio Gallegos Refinery**—pipe still of 6,000 b/d capacity for completion in 1973, at a cost of $6.3 million. **YPF—Campo Duran Refinery**—catalytic refining unit of 2,500 b/d, for completion in 1973, at a cost of $2.6 million. **YPF—Lujan de Cuyo Refinery**—crude refining unit of 113,000 b/d, a doubling of capacity; a vacuum distillation unit of 60,000 b/d, which is a new addition; a hydrotreater of 10,000 b/d; and a hydrocracker of 20,800 b/d.

YPF does most of its own planning and engineering work, and financing will be to a large degree out of internally generated funds. Some projects may be open to competitive bidding, and foreign equipment may play a significant role. The Plaza Huincul Refinery projects are among those open to foreign bidding and will employ foreign equipment. Interested U.S. firms should contact these key individuals in the YPF organization: Ing. Roberto J. Rauil, Manager of the Project Engineering Dept.; Ing. Andres Rozlosnik, Chief of the Planning and Development Dept.; Sr. Water Federico Buhler, Chief of the Office of Purchasing and Contracts, at YPF, Roque S. Pena 777, Buenos Aires.

CANADA—Construction of a **$1.5 million apartment building** in Surrey, B.C., is expected to commence sometime in May. U.S. suppliers are welcome to bid on the following supplies and equipment: stoves; refrigerators; carpets; elevators; window and door hardware; heating, plumbing, and electrical equipment; outside finishes, e.g., brick and wood siding; swimming pool, sauna and recreation room equipment. Contact H. O. Schmidt, 614 Victor St., Coquitlam, B.C., Canada.

FRANCE—A report on **private apartment and motel construction** projects for 1973 and 1974 with the French contact for each project, is available upon request from U.S. Department of Commerce, Trade Opportunities Staff, BDC-584, Washington, D.C. 20230.

Burma To Build Polyester Fiber And Filament Plant

The Executive Director of Burma's Industrial Development Corp., 192 Kaba Aye Pagoda Rd., Yankin P.O., Rangoon, (telegraphic address: INDECOR RANGOON) has issued a call for bids for a semi-turnkey contract for the design and supply of a complete polyester fiber and filament plant, including all mechanical and electrical equipment, materials, accessories, auxiliaries, laboratories, chilled water plant, workshops, cooling towers, water treatment plant, fuel oil storage tanks, water reservoir, power plant to generate electricity for the plant, and related items. Also involved are the provision of technical services and the training of Burmese technicians in the successful bidder's country or a third country in process, plant operation and maintenance, as well as training Burmese workers in plant operation. The plant will have an annual capacity of 3,800 metric tons of cotton type and/or wool type and/or cellulosic type staple fiber or hollow fiber; 1,500 metric tons of filament yarn for texturizing; and 700 metric tons of filament yarn on sized beam for weaving. These capacity figures are based on 365 days, three shifts per day. The basic raw material is polyester chips. Bid deadline is July 9.

One set of tender documents is available for short-term loan and another for office review from: Construction, Water Resources & Eng. Services Div., BDC-742, Room 2116, U.S. Dept. of Commerce, Washington, D.C., 20230, ★202-967-3602, and the U.S. Dept. of Commerce Field Office, 11444 Federal Bldg., 450 Golden Gate Ave., San Francisco, Calif., 94102, ★415-556-5864.

Swiss Firm Wants To Purchase Mobile Disinfecting Equipment

Traconsa AG of Duebendorf, Switzerland is interested in purchasing 30 portable (on wheels) disinfecting units in connection with a Government project they are currently pursuing in Saudi Arabia. Offers should include approximately a two-year supply of disinfectants. Competitive price should be in the range of $10,000 for thirty units. Cost of disinfectants should also be quoted. Send offers to Traconsa AG, Rotbuchstr. 42, 8699 Duebendorf, Switzerland, Attn: Miss B. Glaetti.

Visiting Buyers And Officials

AUSTRIA—Rudolf F. Zelenka, Kromatka-Zelenka Industrierepr., Ob. Donaustr. 71, P. O. Box 6, A-1025 Vienna, interested in **production equipment and supplies for the plastics industry** and finished products made of plastic materiels, also production licenses in this field and technical information. May 28 via New York for two weeks. c/o Professor Mark, Polytechnic Institute of Brooklyn, 333 Jay St., Brooklyn, N.Y. 11201. Itenerary: New York, Chicago, others. WTD in preparation.

TAIWAN—James Cheng-Kuang Chi, General Manager, and Shao-Ping Hsu, Manager, Grace Engineering & Trading Co. Ltd., 140-7 Chang An West Rd., Taipei, interested in representations for **explosives, high grade steel for arsenal production, parts and accessories for motor vehicles.** May 15 via Los Angeles for one month. c/o Department of Commerce Field Offices en route. Itinerary: Los Angeles, Denver, Washington, D.C., New York, Newark, Asheville, N.C., San Francisco. WTD 8/71.

New Publications

When ordering any publications, indicate title and series designation, if indicated, and make checks or money orders payable to the Superintendent of Documents. Orders should be sent to the U.S. Department of Commerce, Washington, D.C. 20230, or to any of its field offices.

DOMESTIC AND INTERNATIONAL BUSINESS

BUR. OF DOMESTIC COMMERCE

Pulp, paper, and board. Quarterly industry report (with 1971 annual review). January/April 1972. Vol. 27, No. 4 and Vol. 28, No. 1. Annual subscription $1 (25¢ more for foreign mailing). Single copy 25¢.

Cost-benefits analysis—potential radiation sterilized military subsistence items. March. 160 pp. $1.25.

BUREAU OF INTERNATIONAL COMMERCE

Foreign Economic Trends

Annual subscription $15 ($6 more for foreign mailing). 10¢ per copy.

Brazil (ET 72-027). March. 12pp.

Colombia (ET 72-028). April. 8pp.

Belgium (ET 72-029). April. 12pp.

Canada (ET 72-030). April. 12pp.

Zaire (ET 72-031). April. 12pp.

International Marketing Information Service

Overseas Business Reports

Annual subscription $16 ($5 more for foreign mailing). Single copy 15¢.

United States foreign trade 1965-71 (OBR 72-005). April.

Selling in France (OBR 72-007). May. 28pp. Supersedes OBR 69-17.

International economic indicators (OBR 72-010). May. 32pp.

ECONOMIC AFFAIRS

BUREAU OF ECONOMIC ANALYSIS

Survey of current business April 1972. Vol. 52, No. 4. Annual sub. including weekly statistical supp. $9 ($3.75 more for foreign mailing). Single copy $1.

Business conditions digest. Series: ES1 No. 72-4. Data through March. Annual sub. including supp. $15 ($3.75 more for foreign mailing). Single copy $1.50.

Defense indicators. Series ES4 No. 72-4. April. Annual sub. $3.50 ($1 more for foreign mailing). Single copy 35¢.

BUREAU OF THE CENSUS

An estimate of a quasi-stable age-sex distribution for Ghana in 1960 (Working Paper 33). April. 28pp. 50¢.

1967 enterprise statistics: part 1—general report on industrial organization (Series ES67-1). 641pp. $7.75.

1969 Census of Agriculture

Area Reports

The report consists of two sections. Sec. 1 contains the introductions, state summary data, county summary of selected data, miscellaneous items by counties, and an appendix giving explanations of the report forms used Sec. 2 contains the detailed county reports.

Indiana (Vol. 1, Pt. 11, Sec. 1. Summary data). March. 366pp. $2.75 (paper).

Indiana (Vol. 1, Pt. 11, Sec. 2. County data). March. 750pp. $5.50 (paper).

Construction and Housing

Housing starts: March 1972 (C20-72-3). May. Annual sub. $2. Single copy 20¢.

Housing completions: February 1972 (C22-72-2). Annual sub. $1. Single copy 10¢.

New one-family homes sold and for sale: February 1972 (C25-72-2). Annual sub. $3. Single copy 10¢.

Housing authorized by building permits and public contracts: February 1972 (C40-72-2). Series C40, price $8 per year; $2 more for foreign mailing; single copy 55¢.

Housing starts: March 1972 (C20-72-3). May. Annual sub. $2. Single copy 20¢.

1970 Census of Housing

Block Statistics

Reports in this series present statistics from the 1970 Census by blocks on general characteristics of housing and population:

Selected areas in New York (HC(3)-163). Feb. 702pp. and 188 maps. $43.

Chicago, Ill.-Northwestern Indiana urbanized area (HC(3)-68). Feb. 654pp. and 82 maps. $16.

Detailed Housing Characteristics

Georgia (HC(1)-B12). 315pp. $3.50.
Kentucky (HC(1)-B19). 259pp. $2.75.
Mississippi (HC(1)-B26). 191pp. $2.
New Hampshire (HC(1)-B31). 95pp. $1.
Oklahoma (HC(1)-B38). 191pp. $2.
Tennessee (HC(1)-B44). 211pp. $2.25.
Virginia (HC(1)-B48). 299pp. $2.75.

Metropolitan housing characteristics for standard metropolitan statistical areas:

Appleton-Oshkosh, Wis. (HC(2)-13). 62pp. 60¢.
Biloxi-Gulfport, Miss. (HC(2)-25). 60pp. 60¢.
Boise City, Idaho (HC(2)-29). 52pp. 55¢.
Great Falls, Mont. (HC(2)-83). 55pp. 55¢.
Green Bay, Wis. (HC(2)-84). 52pp. 55¢.
Kenosha, Wis. (HC(2)-102). 52pp. 55¢.
La Crosse, Wis. (HC(2)-104). 52pp. 55¢.
Las Vegas. (HC(2)-111). 52pp. 55¢.
Lincoln, Neb. (HC(2)-117). 52pp. 55¢.
Nashua, N.H. (HC(2)-142). 52pp. 50¢.
Portland, Maine. (HC(2)-170). 52pp. 55¢.
Pueblo, Colo. (HC(2)-174). 68pp. 65¢.
Racine, Wis. (HC(2)-175). 52pp. 55¢.
Reno. (HC(2)-178). 52pp. 55¢.
Rochester, Minn. (HC(2)-181). 52pp. 50¢.
Tacoma, Wash. (HC(2)-216). 55pp. 55¢.

Foreign Trade

Highlights of exports and imports: March 1972 (FT 990-72-3). April. Annual sub. $5 ($1.25 more for foreign mailing). 45¢ per copy.

Gold movements: March 1972 (FT 2402-72-3). Annual sub. $1. 10¢ per copy.

Industry

Aluminum ingot and mill products: summary for 1971 (Preliminary). Series: M33-2(71)-13. May. Change sheet.

Inventories of steel mill shapes; summary for 1971 (Series: M33-3(71)-13). April. Annual sub. $1.50. 15¢ per copy. 8pp.

Magnesium mill products: 1971 (Series: MA-33G(71)-1). May. 4pp. 25¢.

Selected instruments and related products: 1970 (Series: MA-38B(70)-1). April. Change sheet.

1967 Census of Manufactures

Concentration ratios in manufacturing industry (MC67(S)-2.4). April. 1p. 15¢.

Population

Consumer income: income in 1970 of families and persons in the United States (Series P-60, No. 80). Oct. 1971. 142pp. $1.25.

Preliminary national Census survival rates, by race and sex, for 1960 and 1970 (Series P-23, No. 41). April. 4pp. 10¢.

1970 Census of Population

Metropolitan and nonmetropolitan residence of the population 65 years old and over: 1970 (PC(S1)-16). 4pp. 10¢.

General Social and Economic Characteristics

Oklahoma (PC(1)-C38). 315pp. $2.25.
Rhode Island (PC(1)-C41). 223pp. $1.50.

Population Estimates and Projections

Estimates of the population of the United States to March 1 (Series P-25, No. 482). 2pp. 5¢.

Preliminary estimates of the population of the United States, by age and sex: April 1, 1960 to July 1, 1971 (Series P-25, No. 488). 12pp. 15¢.

Race of the population for standard metropolitan statistical area, urbanized areas, and places of 50,000 or more: 1970 (PS(S1)-15). 12pp. 15¢.

1970 Census of Population and Housing

This report presents statistics for standard metropolitan statistical areas

(SMSA) by census tract on the characteristics of the population and housing units as reported in the 1970 Census of Population and Housing.

Abilene, Tex. (PHC(1)-1). 72pp. 60¢.

Atlantic City, N.J. (PHC(1)-15). 66pp. $1.

Augusta, Ga.-S.C. (PHC(1)-16). 70pp. 60¢.

Austin, (PHC(1)-17). 78pp. $1.

Bay City, Mich. (PHC(1)-21). 56pp. 50¢.

Champaign-Urbana, Ill. (PHC(1)-38). 70pp. $1.

Columbia, Mo. (PHC(1)-47). 60pp. 50¢.

Corpus Christi, Tex. (PHC(1)-51). 78pp. $1.

Fayetteville, N.C. (PHC(1)-68). 74pp. $1.

Fitchburg-Leominster, Mass. (PHC(1)-69). 64pp. 55¢.

Flint, Mich. (PHC(1)-70). 92pp. 70¢.

Jackson, Mich. (PHC(1)-93). 60pp. 50¢.

Kalamazoo, Mich. (PHC(1)-98). 64pp. 55¢.

Laredo, Tex. (PHC(1)-107). 40pp . 50¢.

McAllen-Pharr-Edinburg, Tex. (PHC(1)-126). 80pp. 60¢.

Meriden, Conn. (PHC(1)-128. 48pp. 45¢.

Midland, Tex. (PHC(1)-130). 56pp. 50¢.

Milwaukee (PHC(1)-131). 228pp. $2.25.

Minneapolis-St. Paul, (PHC(1)-132). 268pp. $2.75.

Modesto, Calif. (PHC(1)-134). 88pp. 65¢.

Muskegon-Muskegon Hts., Mich. (PHC(1)-138). 64pp. 55¢.

New Bedford, Mass. (PHC(1)-140). 60pp. 50¢.

New London-Groton-Norwich, Conn. (PHC(1)-143). 72pp. 60¢.

Pittsfield Mass. (PHC(1)-163). 52pp. 45¢.

St. Joseph, Mo. (PHC(1)-180). 64pp. 55¢.

Shreveport, La. (PHC(1)-197). 96pp. and one map. $1.50.

Sioux City, Iowa-Neb. (PHC(1)-198). 60pp. 50¢.

South Bend, Ind. (PHC(1)-200). 84pp. 70¢.

Springfield, Ill. (PHC(1)-202). 73pp. and one map, $1.

Tampa-St. Petersburg, (PHC(1)-212). 168pp. and two maps. $2.

Terre Haute, Ind. (PHC(1)-213). 70pp. $1.

Texarkana, Tex.-Ark. (PHC(1)-214). 68pp. 55¢.

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Vineland-Millville-Bridgeton, N.J. (PHC(1)-224). 56pp. 50¢.

Waco, Tex. (PHC(1)-235). 78pp. $1.25.

Wilmington, N.C. (PHC(1)-235). 64pp. 55¢.

Employment Profiles of Selected Low-Income Areas

Selected rural counties in Alabama (PHC(3)-69). April. 252pp. $2.

Geographic Identification Code Scheme

Northeast region (PHC(R)-3). 92pp. $1.

South region (PHC(R)-3). 172pp. $1.50.

West region (PHC(R)-3). 80pp. 60¢.

ECONOMIC DEVELOPMENT

ECONOMIC DEVELOPMENT ADMIN.

Economic development. May. Vol. 9, No. 5. Annual sub. $1 (50¢ more for foreign mailing). 15¢ per copy.

SCIENCE AND TECHNOLOGY

ENVIRONMENTAL RESEARCH LABORATORIES

Preliminary determination of epicenters. Monthly listings. February. Annual sub. $1.50 (50¢ more for foreign mailing). 15¢ per copy.

Potential capabilities of four lower atmosphere remote sensing techniques (ERL 227-WPL 20). December 1971. 136pp. $1.25.

Description of an experimental investigation on the response of the upper ocean to variable winds (ERL 231-P L 9). February. 60pp. 60¢.

National Marine Fisheries Service

Fisheries of the United States, 1971 (NOAA CFS-5900). March. 107pp. $1. This is a preliminary report.

National Ocean Survey

Tide tables—high and low water predictions: 1973 West Coast of North and South America including the Hawaiian Islands. 232pp. $2.

NOAA. April 1972. Vol. 2, No. 2. Annual sub. $3 (75¢ more for foreign mailing). 75¢ per copy. Quarterly.

NATIONAL BUREAU OF STANDARDS

Cyclic designs (Appl. Math. Ser. 62). April. 79pp. 75¢. Cyclic designs are incomplete block designs based on cyclic development of an initial block or blocks.

A multiplet table of astrophysical interest (rev. ed.). NSRDS NBS 40. February. 253pp. $2. Pending the completion of a current edition, the 1945 Multiplet Table is being reprinted to meet demand.

Engineering and instrumentation—Section C of the Journal of Research. Vol. 75C, Nos. 3 & 4. July-Dec. 1971. Annual sub. $5 ($1.25 more for foreign mailing). $1.25 per copy.

Technical news bulleting. April 1972. Vol. 56, No. 4. Annual sub. $3 ($1 more for foreign mailing). 30¢ per copy.

Polytetrafluoroethylene (PTFE) plastic tubing (PS 52-71). 12pp. 20¢.

Glass-fiber reinforced polyester structural plastic panels (PS 53-72). 13pp. 20¢.

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The management of information analysis centers (PB-208 018). COSATI Panel on Information Analysis Center, Federal Council for Science and Technology, Washington, D.C., paper copy $3.25, 204pp.

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The impact of air pollution abatement on the Copper Industry: an engineering-economic analysis related to sulfur oxide recovery (PB-208 293). Kennecott Copper Corp., New York, N.Y., paper copy $6, 170pp.

Recent developments in desulfurization of fuel oil and waste gas in Japan (1972) PB-208 236). Chuo Univ., Tokyo (Japan), 92pp.

Directory: National organizations with programs in the field of aging, 1971 (PB-208 307). National Council on the Aging, Washington, D.C., paper copy $4.85, 93pp.

Environmental criteria: MR preschool day care facilities (PB-207 819). Texas A&M Univ., College Station, 109pp.

Interfuel substitutability in the electric utility sector of the U.S. economy (PB-208 536). Federal Trade Commission, Washington, D.C., paper copy $5.45, 129pp.

Priorities in energy-related research and development offered for Government support have been evaluated by researchers at the Inter Technology Corporation. Sponsored by the National Science Foundation, the study deals with a plurality of alternatives and the concomitant cost-benefit results thereof:

The U.S. energy problem, volume I: summary (PB-207 517). paper $4.95, 83pp.

Same title, volume II: appendices—part A (PB-207 518). paper $12.50, 744pp.

Same title, volume II: appendices—part B (PB-207 519). paper $12.50, 685pp.

Solar energy in developing countries: perspectives and prospects (PB-208 550). National Academy of Sciences, Washington, D.C., paper copy $4.50, 60pp.

1971 White House Conference on the Aging: population, housing and income, and federal housing programs (PB-207 903). Dept. of Housing and Urban Development, Washington, D.C., 132pp.

Career patterns and values: a study of men and women in the science and engineering (PB-208 305). Columbia Univ., New York, N.Y., paper copy $6.75, 263pp.

Compulsive gamblers (PB-207 602). Princeton Univ., Princeton, N.J., paper copy $5.45. 125pp.

Economic and institutional analysis of water reclamation and reuse projects (PB-206 522). Leeds, Hill & Jewett, San Francisco. 183pp.

Marine transportation systems of the Trans-Alaskan pipeline system (PB-206 592). U.S. Coast Guard. 158pp. Discusses navigation, sources of oil pollution and spill probability, and pollution control.

Detergents in water (PB-206 527). Office of Water Resources Research, U.S. Dept. of Interior. 467pp. $6.

PCB in water (PB-206 534). OWRR, 43pp.

Mercury in water (PB-206 535). OWRR. 298pp.

The following bibliographies contain abstracts of selected reports, journal articles and documents pertaining to water resources:

Report to the President and Congress on noise (PB-206 716). Environmental Protection Agency. 468pp. $6.

Noise from construction equipment and operations, building equipment, and home appliances (PB-206 717). Bolt, Beranek and Newman. 337pp. $6.

Noise from industrial plants (PB-206 718). L.S. Goodfriend Assoc. 336pp. $6.

Laws and regulatory schemes for noise abatement (PB-206 719). George Washington U. 643pp. $9.

Economic impact of noise (PB-206 726). National Bureau of Standards. 112pp.

Effects of sonic boom and similar impulsive noise on structures (PB-206 725). National Bureau of Standards. 20pp.

Carbon-reinforced composite bearing structures (AD-736 915). Avco Corp., Lowell, Mass. 128pp. Presents results of wear tests performed on five types of carbon and graphite fiber compactions and on unidirectionally reinforced composites made using these same fibers in combination with various high temperature matrices.

Boron in composite materials (AD-733 870). Defense Documentation Center. 86pp. Bibliography, with abstracts, dealing with use of boron and boron fibers in prolonging life and reinforcing the structure of composite materials.

Inventory of automatic data processing equipment in the U.S. Government, fiscal year 1970 (PB-205 486). General Services Admin. 391pp. $6.

Same title fiscal year 1969 (PB-205 487). 258pp.

Comparative analysis of human reliability models (AD-734 432). Bunker Ramo Corp. 481pp. $6. Compares 22 models and methods of making quantitative predictions of human performance in man-machine systems.

Highway marking paints (PB-204 271). North Dakota State U. 190pp. Evaluates conventional and reactive type traffic paints on bituminous and concrete surfaces.

Economic effects of deep ocean minerals exploitation (AD-734 968). Naval Postgraduate School. 90pp. $4.75. Discusses world aggregate mineral demand, mineral resources, prospective deep ocean mineral reserves, and effects of manganese nodule exploitation.

Legal problems involved in the authorization of Federal water resource projects (PB-206 096). National Water Commission. 229pp. $6.75. Identifies federal agencies which authorize, review, fund, or administer water resource projects, relates their programs to their statutory background, and describes criteria applied by the agencies in performing their functions. Individual planning problems faced by the Corps of Engineers and the Bureau of Reclamation and problems common to federal water resources development are analyzed.

Abstracts and summaries of literature on drugs from the sea, 1967-70 (COM-72-10139). U. of Miami. 199pp. $6.

Pneumatic hammer development (SCL-DR-69-155). Sandia Labs, Livermore, Cal. 56pp. Describes component parts of a pneumatic hammer designed with a simplicity of operation that provides a capacity for many daily tests.

PB-206 618-1—Documents for the U.N. conference on the human environment, Stockholm, June 5-16, 1972, part I, Dept. of State, 137pp. Contains: agenda, annotated agenda, rules of procedure, declaration, and action proposals.

PB-206 618-2—Same title, part II, paper copy $6. 401pp. Includes: planning and management of human settlements for environmental quality; environmental aspects of natural resources management; identification and control of pollutants and nuisances of broad international significance; educational, informational, social, and cultural aspects of environmental issues; development and environment; and international organizational implications of action proposals.

PB-206 618-3—Same title, part III, 84pp. Includes: administration coordinating committee report and bibliography.

PB-206 618-set—Same title, paper copy only, $12. 622pp.

The following reports comprising the final environmental impact statement on the proposed trans-Alaska pipeline are available. Reports provide a systematic integrated analysis of the environmental impact of the proposed pipeline:

An analysis of the economic and security aspects of the trans-Alaska pipeline, Volume I: Summary (PB-205 744). Dept. of the Interior, Washington, D.C., paper copy $4.75. 184pp.

Same title, Volume II: Supporting analyses (PB-205 745). Paper copy $4.75. 261pp.

PB-206 921-1—proposed trans-Alaska pipeline, Volume I: introduction and summary, Dept. of the Interior, Washington, D.C. 412pp.

PB-206 921-2—Same title, Volume II: environmental setting of the proposed trans-Alaska pipeline system, paper copy $6. 576pp.

PB-206 921-3—Same title, Volume III: environmental setting between Port Valdez, Alaska, and West Coast ports, paper copy $6. 519pp.

PB-206 921-4—Same title, Volume IV: evaluation of environmental impact, paper copy $9. 680pp.

PB-206 921-5—Same title, Volume V: alternatives to the proposed action, paper copy $6. 531pp.

PB-206 921-6—Same title, Volume VI: consultation and coordination with others. Discussion of points raised during review and the public hearing process. 486pp.

PB206 921-set—proposed trans-Alaska pipeline, paper copy only, $30. 3,204pp.

Group behavior in a simulated panic situation (AD-731 741). By U. of North Carolina for the U.S. Navy. 10pp.

Survey of commercially available catalyst and sorbent materials (PB-203 358). By Battelle Memorial Institute for the Environmental Protection Agency. $6 (paper). 318pp.

Using soil filtration to reduce pollution potential of lagoon effluent entering ground water system (PB-203 348). By Iowa State U. for the Office of Water Resources Research. 27pp.

Survey of USSR air pollution literature, Vol. IX: Gas resistance of plants with special reference to plant biochemistry and the effects of mineral nutrition (PB-203 504). By American Institute of Crop Ecology for the Environmental Protection Agency. 121pp.

Same title, Vol. X: Toxic components of automobile exhaust gases . . . their composition under different operating conditions and methods of reducing their emission (PB-204 362). 139 pp.

New directions in materials research dictated by stringent future requirements (N71-32349). By NASA's Lewis Research Center, Cleveland. 80pp. Outlines requirements for such projects as automotive thermal reactors, jet engines, space shuttle, and space nuclear power systems.

Nebraska's air ambulance project (PB-203 293). By Nebraska Adjutant General's Office for the Federal Highway Admin. 51pp.

Economic and financial feasibility models for new community development (PB-206 925). Real Estate Research Corp., Washington, D.C., 232pp.

Environmental pollution: sanitary engineering and industrial waste (AD-737 500). Defense Documentation Center, Alex. Va., 205pp.

Air quality considerations in transportation and urban planning: a five-year program guide (PB-207 111). Voorhees & Associates, Inc., McLean, Va., 199pp.

The United States and Japan (AD-737 041). Air Force Academy. 1972. 38pp.

Pollution abatement and unemployment—a methodological study (PB-207 109). Institute of Public Admin., Washington, D.C., 154pp.

The cost of college (PB-205 855). Columbia Research Assoc., Cambridge, Mass. 56pp. $4.75. Gives a detailed analysis of the financial and operational characteristics of fifty pre-doctoral colleges over the period of fall 1967 to spring 1970.

Low wages and the working poor (PB-206 095). U. of Michigan. 469pp. $6.

Fixed nonresidential business capital in the United States, 1925-70 (COM-71-01111). Prepared by Commerce Department's Office of Business Economics. 545pp. $7.75. Tabulations of gross and net capital stocks, depreciation, discards, and average ages of gross and net stocks are given by major industries and detailed types of equipment and structures.

Cost and utilization control of freight car equipment provision (PB-204 884). H.O. Whitten & Assoc., Annandale, Va. for the Federal Railroad Admin. 80pp. Reviews the freight car utilization problem and discusses the impact of rate of utilization on freight car costs and profits. Report discusses deficiencies in existing railroad cost accounting systems and proposes a system that associates freight car costs with functional and geographic responsibility centers.

Charged droplet technology for removal of particulates from industrial gases (PB-205 187). MIT. 125pp.

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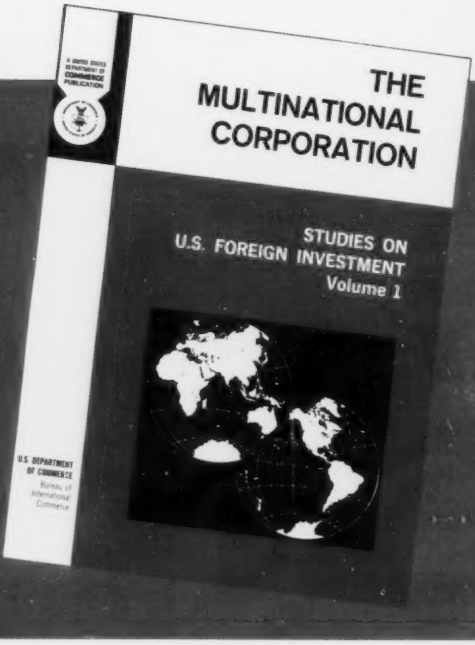

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